The Graduation Address

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LADIES AND GENTLEMEN,—I had occasion some years ago to encounter what I have selected as the text of this little sermon, or address, in a form which I venture to think is susceptible of improvement—demanding, in fact, what, if it were a Biblical text, we should call a "revised version." As it is only, however, a very common French proverb, we may take it upon ourselves now to adopt it with the rendering most suitable for our purpose. I was standing, on the occasion referred to, in the reception-room of the British Medical Association, while one friend, locally familiar with the ground, was inquiring for tickets for some evening entertainment or other, while another friend, a very distinguished ethnologist, and I were awaiting the result. The first friend was by this time pretty well merged in a crowd, all alike clamorous for tickets, on which he ejaculated incidentally, "Ah, everything comes to him who waits." "I beg your pardon," I remarked, "you will not say that if the tickets are all done and you find you cannot get them." "How do you reconcile that proverb," said the ethnologist to me, "with Shakespeare's 'tide in the affairs of men that, taken at the flood, leads on to fortune'?" "Oh," I replied, "I do not see any difficulty there; but our friend has quoted the proverb wrongly." "How so?" "The proverb, as I understand it in French, does not promise anything at all to the man who merely waits, but everything to the man who *knows how to wait*." And the distinction here is all-important; for Shakespeare's "tide" is just as likely as not to submerge the man who, like Dickens's Micawber, is merely waiting for "something to turn up," while it "bears on to fortune" only the man who "knows how to wait"—who is not merely waiting, but is ready and fully equipped and armed to take the advantage of the tide when it comes. The proverb, therefore, is all right in its real and original form, and Shakespeare is also all right; and both of them contain a good deal of the philosophy of human life and of human effort which it may well be worth while for all of us to consider a little on the present occasion. For, graduates, I am afraid it must be admitted, for most of you at least, that a good deal of "waiting" will have to be done, now or later, before you can expect to reap the highest rewards of your profession. It will not be given to many of you, as to a very excellent hospital assistant of mine now in Johannesburg, to be pitchforked at once into a share of a practice worth several thousands a year, and likely to be largely increased. You will have to wait, most of you, perhaps all of you, for considerable success in your profession; and you may have to wait longer than you quite like. But as this waiting has got to be done—as it is part of the game, in short, and, as I hope to show you, a very important and even beneficent part of it—my lesson to you is that it is as well to study how you can play this waiting game scientifically and practically, according to the laws of the game. My lesson to you is that you should not fret or worry over this, but rather be well advised about it beforehand; in other words, and in the words of the proverb, that you should "know how to wait."

"*Tout vient à point à qui sait attendre.*" That, I believe, is the true original form of the proverb, and, as you will easily see, it contains a far deeper philosophy of life than the current English version, even if we admit that the latter has any meaning at all for us, or is not absolutely misleading. "Waiting" is here set forth as a part, and a very important and necessary part, of the art of success in life; it is to be studied as a branch (a Frenchman might say) of the *savoir vivre*. It is to be accepted, not in a spirit of restlessness and impatience, still less in the mere happy-go-lucky mood of a Mr. Micawber, but rather as a part of every earnest man's destiny, and in the full confidence that when it is so accepted and so used by a man working in the right way and in a corresponding temper of mind, the opportunity will come, the tide will rise, which "taken at the flood" (as Shakespeare says) "leads on to fortune." And so the immortal dramatist, he who was "not of an age, but for all time," is found to be in perfect accord with that possibly very far inferior authority unknown, who devised and popularised the science of "getting on" in life in the very epigrammatic phrase with which this little address began.

There need be no hesitation, then, in recommending to you, as young graduates entering on a medical life and medical responsibilities, that you should try, above all things, to "know how to wait." That is the very plain and obvious condition, the first step towards ultimate and honourable success in medicine as well as in every other high pursuit. The great statesman, for example, is he who can "take occasion by the hand, to make the bounds of freedom wider yet"; but he must be content to wait for the occasion. The greatest general or admiral at the head of the strongest army or fleet will be the most careful to see that success is not marred by an inopportune moment for an engagement. Why, then, should you, with all the world before you, and all your lifetime to work in, not "know how to wait"? Why risk all that should be most valuable in your life in one ugly rush—character, experience, efficiency in the end—because, owing to faults of temper, or even the laudable desire to "get on," or the apparent and immediate need thereof, you feel tempted to satisfy all your ambitions at once? "Waiting"—in the sense of the proverb—is not idleness, and in our profession of all others it has no need to be an unprofitable or degrading occupation. There is plenty to do for all of us, if we can only accept our just position and act in a subordinate part with frankness and sincerity. It is even a duty of the first order to keep ourselves, body and mind, in a state of preparation for higher duties; and therefore no one can for a moment think of "waiting" in the sense of a folding of the hands or of what is called across the Atlantic "loafing around." No; he who "knows how to wait" will strive to keep himself always ready to use favourably the occasion when it comes. He will instinctively beware of letting his faculties go to rust; and you, graduates, will naturally seek such occupation as will conform to the large and valuable discipline which you have already undergone. But you will, nevertheless, "know how to wait"; and sooner or later the favourable occasion, or occasions, will come. And then, just because you have so waited and so kept yourselves in readiness for them, you will reap your reward.

There is nothing very profound in all this, you will say. No; but still it requires to be thought about seriously and often. Many a promising career has been blasted, many a life practically thrown away; still worse, many an honourable beginning converted to quackery and baseness by not knowing or not believing that all will come right to him who knows how to wait. The temptations of a medical career are not small—it may even be said that to ill-regulated or over-ambitious minds not guided by principle, and easily swayed by self-interest, they are apt to be overwhelming. Let me advert very briefly to only two out of the many.

1. There is the making haste to be rich—not, perhaps, necessarily a fault (much less a crime) in itself, but certainly an unbecoming attitude of mind in an early medical career, and one which is not easily reconciled with the principles of your higher and nobler vocation. "They that will to be rich," says an old and venerable book, "fall into temptation and a snare, and into many foolish and hurtful lusts which drown men in destruction and perdition." It can hardly be disputed that the temptation and snare here referred to receive many illustrations in connexion with the profession of the healing art. Nor is it at all an exaggeration to say that the making of money, if advanced to the rank of a first principle and practised without any scruple or any restraint of honourable tradition, is by far the easiest part of success in the art. The vast fortunes made by the most glaring quackeries, the immense sums spent (it is to be presumed profitably) in the advertisement of remedies which are either worthless or set forth in terms that can only be described as evidently mendacious, are the standing proof that the art of medicine, if pursued as a mere trade, is at once the easiest and the worst, or the most contemptible, of all possible trades. It may, therefore, nay, will often, occur to you in your early career that the restraints upon your freedom of action arising out of the necessary and honourable tradition of centuries, and out of the almost unspoken influence of all that

you have been taught in this University, are somewhat in the way of your success, if the "tide which taken at the flood leads on to fortune" is to be merely a tide of fees. I know not if it is an absolutely true story, but it is one which might be true, and almost looks like the truth—that of the bone-setter in Paris, who, on account of some questionable transactions, was visited by the police as practising irregularly without a diploma. The story goes that a perfectly regular diploma was immediately produced; but that the supposed culprit earnestly requested the police agent not to betray him, and explained that he had carefully concealed and deliberately suppressed his diploma, "because" said he, "I once practised on the strength of it and was starving; and now, by behaving like a charlatan, and freely advertising as such, I am already a rich man." The moral of the story is that in the making of money, as in other things, you must "know how to wait." The money will come, unless you are very unlucky, with the gradual increase of reputation and in the faithful, quiet, honourable discharge of higher duties; but to make it a first consideration is almost the sure road to a fatal lowering of tone, to the alienation of your more honourable brethren, and in the end to "destruction and perdition" in a medico-ethical, if not also in the apostolic, sense. In the course of a pleasant excursion not long ago with a number of medical brethren, most if not all of them old pupils of mine, and as good fellows as I can desire my old pupils to be, one of the best and not least successful said to me jokingly, "You never taught us how to make money." I at once admitted the truth of the remark, but it was because in my opinion that part of a medical education may, nay, ought, to be severely left to itself. The money-getting side of your art is very easily, perhaps too easily, learned by those who desire it above all things; but it is not to be looked on as the end, much less the beginning, of your professional efforts. This medico-ethical disability (if such it be) is not one that attaches to our calling exclusively, or even especially. It is true that we have to live by our profession; but at the same time we are bound, as in all high and noble callings, by a much higher law—we are bound in every instance and at every stage of our career so to live that the higher is not sacrificed to the lower. It is not too much to say that every man worth his salt in the medical profession makes up his mind from the first, and advisedly, to do far more for nothing, or for the love of it, than he can ever do for fees. One cannot but regret that it should be needful to place this high doctrine thus clearly and definitely before young and generous minds which are not, as a rule, given over to the opposite view. But the sheer necessities of your early struggles in some cases, and in all cases the hardening influence of a kind of trades unionism that is now being at many points insidiously introduced into professional life, has a tendency to displace its purer and nobler traditions, and to subvert the teaching of that grand old Hippocratic oath, which in a modified shape is still the substance of the declaration that each one of you has adopted to-day as the rule of your life. I will not go into details, because time will not permit. I will rather take an illustration from another calling, which lies ready to hand. In the current number of the *Quarterly Review* there is an article under the title "On Commencing Author," in which you may read as follows: "There are numerous motives operating upon the true man of letters ..... urging him to exercise his vocation, and to exercise it to the very best of his power without being paid for it at all. We do not say that he will not ask for his cheque, or thankfully accept it, but we do say that the motive which prompted him to write, if he is likely to be worth his salt in literature, is a motive with which the cheque had nothing whatever to do." The last word that can be said in this place, on this branch of the subject, is that you should love your profession as such—love it so well and with such a whole heart that you cannot think of it as a mere trade, under whatever apparent compulsion of necessity; and to do this, which in the end will be your true advantage and benefit, even (in most cases) from the pecuniary point of view, you must above all "know how to wait."

2. The second great temptation which tends to make shipwreck of a medical career, especially in its earlier stages, is an uneasy personal vanity or egotism which makes itself, as it were, the centre of the medical universe and is never done inquiring, "Why am I not as well off as A, or B, or C, who may have been more lucky, but is certainly not better or abler than other people"—or than the complainer, to wit? It is very easy to have this feeling within limits, and perhaps impossible to avoid it altogether; but it is also very easy so to cultivate and coddle it under one or another specious disguise that it becomes a perfect passion for demeaning others, a perpetual cover or cloak for malice, hatred, envy, and all uncharitableness. I hope you will most of you avoid yielding to a weakness which is often that of the strongest and most active minds, and which will often claim to be even a virtue in respect of its bold nonconformity or want of respect for persons, in denouncing what it pleases to hold as abuses. The only criticism, however, I am concerned at present to pass upon such persons is that they are usually glaring examples of men who do not "know how to wait," and who therefore allow their talents, their time, and all that should be most valuable to them, to be squandered in personal and for the most part petty disputes and differences. The result is, that instead of everything coming to them *à point*, as in the proverb, they find themselves from first to last handicapped in the race of life by personal animosities and antagonisms, many of which are not shared in even by the persons, of more quiet and even temper, whose peace of mind it has been intended to disturb. I do not say that it may not occur to any one of you to have to take a part, as matter of duty, in controversy; but as a rule controversy, and especially personal controversy, is to be avoided, and is always particularly to be avoided in the case of young aspirants who, from want of experience if not from their own overweening vanities and conceit, may be too readily brought to mistake very small issues for large ones, and so to nurse, as it were, a vindictive soreness at what they deem to be the neglect of their own high ideals. The broad and large common-sense and the generally peace-loving disposition of the medical profession usually discounts the pretensions of such erratic and quarrelsome members of it, and relegates them sooner or later to the category of men who stand in the way of its normal business, because they have never learned "how to wait."

You will see, I trust, from these examples of the snares and possible pitfalls that beset the path of the young graduate waiting for employment and reward, that the temper and spirit in which that *waiting game* (as I have called it) is to be played may have a very large and important influence on your future happiness and success. If the game of life is not a mere haphazard, if it is at all like (say) a game of chess in its intricacy and its demands on your skill, you will not succeed in it in such a way as to be satisfactory to your friends or yourselves unless you give some attention to the laws of the game; and by these I mean not only those obvious and comparatively well-defined rules the violation of which will involve you immediately in disaster, but those laws also—moral, spiritual, and physical—the study of which, and the acting on which, are absolutely necessary to secure a well-founded and enduring success. A false step in the beginning may have consequences to you which can never be repaired. But (what is perhaps of even greater importance), in medicine more than in most other callings a steady and satisfactory progress depends much more upon *character* than even on the most brilliant talents; and character, though it may easily be lost by a single false step, can only be built up gradually by many acts of personal devotion, and by the application in detail of all that you have learned for the relief of suffering humanity during these years of your probation. Hence it may be said with perfect truth that the more modest *rôle* at the beginning, is often not only the safest, but also the most successful (in the best sense of the word) in the end. The subordinate position, while it enables you greatly to extend your experience, and to keep all your powers and your acquirements well in hand for future use, is often much to be preferred to the more ambitious programme, which by giving you a nominal independence would also place you in a position of comparative isolation, with comparatively slender resources that can be turned to future account. A man who "knows how to wait" will not despise the day of small things; but he will say to himself, Whatever happens, I must above all things be ready: I must, in any case, strive to keep what I have learned and earned in the way of skill and experience; and I can only do this, by steadily persevering in getting more. So that the question of immediate success, whether in the way of emolument or of reputation, is often merged in the larger question, How am I to keep my powers intact for a larger success later—to maintain the discipline of mind and of body, of fingers, and of ears and of eyes, the familiarity with practical methods and processes, which up-

till now has made me what I am, a legally qualified practitioner and graduate?

It is at this point, graduates, that I venture to commend to you—not for the first time, as you will find from the other little printed address which I have caused to be handed round among you—the claims of the thesis for the degree of M.D. (such of you as mean to go on by-and-bye to that higher degree) to your careful consideration from the very commencement of your medical career. Under the newest regulations by ordinance, the thesis has ceased to be, what it long was, the only academic test employed in respect of the higher degree; but it remains, and probably will remain, the chief test for honours or distinctions under the new system as under the old. But however it may be in this respect worthy of your early attention, there can be no doubt, I think, that the gradual maturing of the faculties towards a well-considered and, if possible, original thesis on a subject absolutely of your own selection forms an admirable way of keeping your faculties in good repair, of proving your powers to yourselves, and in the end of making them apparent to others without even the faintest surmise of self-advertisement in a bad sense; for the thesis that bears any trace of such a destination is pretty sure to be rejected. So highly do I (and this, I think, is true also for all of us in the medical faculty)—so highly do we all appreciate the value alike to you and to your Alma Mater of a thoroughly good thesis that we heartily wish it were within the power of the University to offer, as has long been the case in Edinburgh, a certain number of gold medals as the reward of very high distinction in this respect. I may add to the expression of this wish (not now for the first time), that without any certain knowledge I am also not altogether without a hope that through the goodwill of some benefactor proceeding upon a recognition of the desire in question it may ere long be accomplished.

I have hitherto considered the French proverb or epigram with which we began from the point of view which was probably that of its unknown author—viz., as referring to worldly success only, or chiefly; a high kind of worldly success, it is true, and such as we, your professors, wish for all of you in your art; certainly not such a success as forms in and by itself a degradation of the art of healing. But I should like before I close to lift the argument for a moment into a yet higher region, and to show you, if possible, that there is a very grand and noble interpretation of the proverb, a spiritual sense of it, in which the "waiting game" may be played with absolute security and with a success, in the highest sense of the word, that none of the "chances or changes of this mortal life" can ever diminish or take away. In one of his most intricate and, I will add, difficult arguments in the Epistle to the Romans (Chapter viii., v. 28) St. Paul has formulated for us a proposition which, although I do not much approve in general of texts as detached from their surroundings, I will take the liberty on this occasion of so detaching; inasmuch as while the context is of the nature of an argument, and one which has led to much controversy, the few words I refer to are really of the nature, not of argument, but of deep spiritual experience, and have a very curious parallelism, so to speak, with the wording, not to say also the meaning, of the French proverb. "We *know*," says St. Paul (not as admitting any doubt of it at all) "that all things work together for good to them that love God." Listen again to the Frenchman: "*Tout vient à point à qui sait attendre.*" Is there any real relation or connexion between these two expressions? I think there is; and if you will bear with me still for a few minutes I will endeavour to show you that the relation is not only real, but that it goes to the very root of the whole matter.

Huxley, in one of his early discourses upon the laws of Nature, has a superb—I would say a noble, even a sublime—image which ought, in my opinion, to have gone one step further, but which, even as he has it, might have saved him from the remarks of some who have confounded his agnosticism with irreverence. He represents man as playing for his life at a game of what we ignorantly call hazard, against a beneficent and pitying angel, who as a matter of duty will always oblige him inexorably to keep the laws of the game whether he loses or wins; but who, so far from being vindictive or adverse in feeling to man in this trial of his powers, "would as soon lose as win." Now, this is Huxley's way of saying, in what he regards as scientific (though at the same time highly imaginative) language, what our Frenchman has said in the proverb; and it is also, I think, a reflection in some degree (though, of course, without the theistic and emotional element) of the burning words of St. Paul. The point which is common to all three is the idea that human life, its successes and its failures, are in some way or other under the influence of *laws;* and even Huxley, who was no materialist, would assuredly have admitted (though he does not say so) that these laws of our being extend over the mental, moral, and spiritual region as much as over the material. Play the game, he says, according to the rules; for if you do not, ignorance of them will not protect you, but if you do you *may* win, and, in any case, will have done your best. Be sure, says the Frenchman, that if you can only *wait* and be ready, the occasion will come, and with it all things will come to a point for you. Love God, says St. Paul, and all things are yours; for "all things work together for good" to such as love God and conform to His sovereign will. Of course, there is an element here that is not found directly in the other two. It is what we may call the definitively Christian or religious element. The French proverb here is carried up to its highest terms in the form of a great and far-reaching spiritual experience.

But in another and, perhaps, an even more remarkable phrase used by St. Paul elsewhere the sublime idea here set forth is carried on a stage further. Of himself and Apollos he says, in speaking of the foundation and planting of the Corinthian Church (1 Cor. iii., 9), "We are God's fellow-workers; ye are God's husbandry, ye are God's building." This working together of all things for good, therefore, admits of active as well as passive coöperation with God, and those that work on these lines in the love of God are *συνεργοὶ τοῦ θεοῦ*—labourers together with God (as the Authorised Version has it); God's fellow-workers, more literally and more strikingly, in the Revised Version. Here, one can see at once, is the implied condition of the *synergy*, the working together for good, that is pointed to in Romans. In doing God's work, doing it consciously and along with Him, we cannot fail to have Him with us. Thus it is that "all things work together for good to them that love God" and are willing to coöperate with Him in His work. Success in life, as this view of the matter puts it, depends on what you mean to do and how you mean to do it. If your only objects are money, reputation, a crowd of patients, and large fees you may very easily fail; nay, you will certainly fail in some degree, for the desire in these cases increases usually beyond the means of its satisfaction. But if you desire, humbly and reverently, to work the work of God, and be a "fellow-worker" with Him, in what profession can you accomplish this object more consciously, more surely, or more inevitably than in ours?

Natura non nisi parendo vincitur. In that saying of the great Chancellor, Francis Bacon, is contained the whole secret of medical as of all other real success. Whether it is the healing of a broken bone, or of a wound, or of a fever, it comes round again to that. By obeying the laws of nature, by working consciously along with them, by adapting our efforts to their conditions, we, too, become "fellow-workers with God." In the material as in the spiritual world it is the same law which governs the whole. God is the great worker—the great Healer. It is through knowing His laws, and acting on them and through them, that we can best, or indeed alone, coöperate with Him. And in so working with God, even if we have to wait for it, success is assured. "*Tout vient à point à qui sait attendre.*" Only, for success in the highest, in the only real sense, it is necessary to "love God" as well as to know His laws. Then, indeed, we shall find that "all things work together for good," and the "waiting game"—even if it comes to that—is assured of success.

Few things in the personal history of great men are more pathetic and at the same time more encouraging from this point of view than what we have come to know of the blindness of John Milton. It came upon him, not suddenly it is true but completely, in his forty-fourth year. "What a fate!" writes Professor Masson, in detailing all the circumstances with his usual pious care and unwearied diligence. "All his intentions, all his projects, all his hopes of further activity and usefulness, turned into mere gropings through a future of blackness. His secretaryship, to which he had been accustomed, the duties of which he had come to like, how on any terms could he give up that? Then, apart from his secretaryship, the cutting short of his own cherished studies and the fond occupations of his life hitherto, his miscellaneous pursuit of

knowledge, his commerce with the books he had gathered about him and with the libraries at hand, his unfinished controversies"—all this and more, it will be admitted, forms a most discouraging picture of calamity and possible ruin in the very middle of a great career. But Milton was one of those men who know how to wait. He tells us so himself in those two admirable sonnets to Cyriac Skinner, in 1655, when the calamity had already been borne for three years. He had a good many more years to wait before he had quite accommodated himself to the new conditions. He had to go into hiding at the Restoration, and then to live in comparative obscurity after he had regained his freedom. Altogether, it was a very poor case, speaking from the point of view of the worldling, for the man who under Cromwell was probably the most powerful as well as most renowned of Englishmen, Cromwell himself excepted, and whose "*Defensio pro populo Anglicano*," with its bitter controversial sequels, were not only in some degree the causes of his blindness, but also of his exultation; as he himself says:—

> "Liberty's defence, my noble task,
> Of which all Europe talks from side to side."

Yet it is none the less true that for us, and for all time, the real greatness of Milton was, in a very genuine sense, the outcome of his blindness and comparative obscurity, for to these we owe "Paradise Lost" and "Regained," "Samson Agonistes," &c., while the "Defensio" is now only rescued from oblivion by its being the work of one at no time unconscious of his own great powers, but who had assuredly not taken a just measure of them when he wrote in early despair of his great calamity just alluded to:—

> "That one talent which is death to hide,
> Lodged with me useless"—

and when, in the calm anticipation that his time of activity and usefulness was ended, he brought this wonderful sonnet to a close in the line:—

> "They also serve who only stand and wait."

I hope most sincerely, ladies and gentlemen, that none of you will have a trial like that of John Milton. But if it should be so, you will draw some encouragement and some small degree of hope, it may be, from his noble example. At all events, your course is now clear. You are graduates of this ancient University, and, as such, fully entitled to practise the art of healing throughout Her Majesty's dominions. We desire to accord you our heartiest congratulations, and to part with you in sincere good-will and with every disposition to help you in your work. What that work is to be we do not presume any longer to dictate. But whatever it may be, we trust that you will apply yourselves to it in the spirit of Longfellow's noble lines, which form the conclusion to the "Psalm of Life," and with which I, too, will close this address:—

> "Let us, then, be up and doing,
> With a heart for any fate;
> Still achieving, still pursuing,
> Learn to labour and to wait."

AMYLACEOUS DYSPEPSIA.

BY JAMES TAYLOR, M.B., B.CH. R.U.I.

DURING the last few years so much has been written in regard to that complaint which is so common, and which plays so important a part in the life-history of patient and practitioner alike—dyspepsia—that it cannot be said that the subject has not received its due share of attention at the hand of the profession. But, notwithstanding all that has been said on the subject, clinical results show clearly that our knowledge of the pathology of the many varieties of dyspepsia is still very meagre. That the complaint is a difficult one to deal with becomes evident when to the consideration that in a large proportion of dyspeptics no evident anatomical lesions can be detected in the organs to which the maldigestion of the food can be referred, we add the fact that there is such an intimate relationship between the different organs concerned in the processes of digestion that when derangement in an organ takes place it is difficult to say which one is primarily at fault or how far the defaulting organ may influence the others. Amylaceous dyspepsia is a variety of this complaint which until recently seems to have received little attention apart from its inclusion in the consideration of a general condition at the hands of the profession. It is to this form that I would now briefly call attention.

It has been assumed that the pronounced acidity coming on in dyspeptics after meals is caused by an increase in the quantity of hydrochloric acid in the gastric juice. In the majority of cases the burning fluid which regurgitates into the mouth is a mixture of lactic, butyric, and acetic acids arising from the fermentation of the carbo-hydrates and fats. The gases and acids arising from the fermentation of the fats do not constitute an important clinical factor, owing to the comparatively small amount of fat taken as food, and when fermentation of this class of foods takes place it occurs most frequently in connexion with a like process in the carbo-hydrates. Illustration of the process is to be found, in a general sense, in the formation of the lactic acid, which can be readily produced artificially by placing bread with water in a warm chamber. During the process which ensues the sugar of the bread is converted into lactic, butyric, and acetic acids.

To understand what the derangement termed amylaceous dyspepsia is, it is necessary to have clearly before our minds what occurs during the normal digestion of amylaceous substances. In this connexion I may mention that the recent contributions by Dr. Christopher to the subject of indigestion are interesting. He prefers the term "super-digestion" to "indigestion." According to this authority the normal digestive processes are due to fermentations brought about by the unorganised ferments of the alimentary canal. Pathological fermentations are induced by organised ferments and micro-organisms, which exert their peculiar action on the products of normal fermentation. In other words, he defines super-digestion to be the result of pathological fermentations of the products of normal digestion. In salivary digestion the starchy portions of the food are transformed into maltose and dextrine. This change may be represented by a chemical equation:—

$$\underset{\text{Starch.}}{3(C_6H_{10}O_5)n} + nH_2O = \underset{\text{Maltose.}}{nC_{12}H_{22}O_{11}} + \underset{\text{Dextrine.}}{nC_6H_{10}O_5}.$$

This transformation takes place best in a neutral medium. Until recently it was supposed that the action of the ptyalin of the saliva was stopped immediately the food entered the stomach, owing to the hydrochloric acid being formed in sufficient quantity at the commencement of gastric digestion to neutralise the alkaline saliva. Velden has, however, shown that there is no free acid in the stomach before the expiration of from three-quarters of an hour to two hours after the arrival of food in that organ. During the earlier stages of digestion it is almost certain that the hydrochloric acid secreted combines at once with the proteids, and that no free hydrochloric acid appears in the gastric secretion until the proteids have combined with as much hydrochloric acid as they require. It is supposed, therefore, that during this interval the ptyalin is permitted to maintain its action. This hypothesis was confirmed by the observations of Chittenden and Ely, which showed also that saliva neutralised with acid is more active than ordinary alkaline saliva. A portion of the acid secreted by the stomach in the early stage of gastric digestion is thus presumably used in the neutralisation of saliva, and is, in consequence of this action, an aid to ptyalin, which is, *per se*, an active ferment. The resulting products of starchy proteolysis begun in the mouth and carried on in the stomach are therefore the same as those resulting from the action of saliva alone—namely, maltose and dextrine, the action being merely increased. Ultimately the greater part of the dextrine is changed into maltose. No grape sugar is formed. Therefore, in cases of excessive acidity we must look for some other source of the lactic acid, and in order to do this we must consider the action on the cane and grape sugars taken as food. Cane sugar becomes converted into invert sugar (a mixture of lævulose, or fruit sugar, and dextrose, or grape sugar), and grape sugar lends itself readily to the process of lactic acid fermentation. This accounts for the fact that intolerance is shown by many dyspeptics to saccharine substances. The changes in grape sugar are the result of the action of fermentative organisms, and may be represented by a chemical equation:—

$$\underset{\text{Grape sugar.}}{2C_6H_{12}O_6} = \underset{\text{Lactic acid.}}{4C_3H_6O_3}$$

$$\underset{\text{Lactic acid.}}{2C_3H_6O_3} = \underset{\text{Butyric acid.}}{C_4H_8O_2} + 2CO_2 + 2H_2$$

The conversion of starch ceases on the appearance of free hydrochloric acid in the gastric secretion, as ptyalin is destroyed by the acids of the gastric juice in full digestion. The digestion of starch is, however, resumed again in the intestine under the influence of the pancreatic and intestinal secretions. The amylopsin of the pancreatic fluid converts starch into maltose, which is further slowly transformed into grape sugar. Cane sugar is an important article of food, and is consumed by us in large quantities daily. It is, however, a crude form of food, and requires to be converted into invert sugar, which, as has already been stated, is a mixture of lævulose and dextrose. This transformation is brought about under the influence of the inversive ferment of the intestinal secretion, and may be represented by an equation:—

$$\underset{\text{Cane sugar.}}{2C_{12}H_{22}O_{11}} + 2H_2O = \underset{\text{Dextrose.}}{C_{12}H_{24}O_{12}} + \underset{\text{Lævulose.}}{C_{12}H_{24}O_{12}}$$

Under pathological conditions the grape sugar resulting from the digestive processes in the intestine yields lactic and butyric acids. Or the grape sugar may undergo the alcoholic fermentation, and the resulting alcohol may in its turn undergo the acetous fermentation, forming acetic acid. This super-digestion is brought about under the influence of fermentative organisms, which are more constant in the intestine than in the stomach. Super-digestion of carbohydrates occurs, as already stated, in those disordered conditions in which excessive fermentative processes are occurring. The clinical features present in these cases are: pain of a sickening, weakening character, coming on about three or four hours after food, referable to the abdomen, but not as a rule localised. Relief is usually experienced on taking food. There are paroxysms of marked severity at night, loss of weight, abdominal distension and tympanites, furred tongue, and constipation.

From what has been said it may be presumed that in all probability the distress after eating experienced by many dyspeptics is not necessarily due to a deficiency of pepsine (some authorities deny that deficiency of pepsine does occur), but rather to an accumulation of gases and acids produced by the fermentation of the food in the stomach and intestine. If the discomfort does not commence until three or four hours after the ingestion of food we may take it for granted that the fermentation is mainly or entirely intestinal. The view that pathological intestinal fermentations take place for the most part in the products of normal digestion is supported by the fact that intestinal disturbance is induced in the majority of these cases by a vegetable diet. This is not to be wondered at when we consider that fully two-thirds of the food of mankind consists of starch, and that the greater portion of the starchy food reaches the intestine unchanged. In some rare cases fermentation of the normal products of salivary digestion takes place in the stomach, for, in the absence of hydrochloric acid, gastric digestion would be attended normally by the formation of fermentation acids and gases, giving rise to pain and discomfort shortly after the ingestion of food. Lactic acid formation in any appreciable quantity is an evidence of the deficiency of the normal acid of the gastric juice. Under these circumstances the administration of hydrochloric acid might be beneficial.

With regard to the treatment of those cases in which excessive fermentations of the products of starchy proteolysis are occurring in the small intestine, it is obvious that to eliminate carbohydrates from the food and to strictly limit the diet of the patient to purely albuminous substances for about a fortnight would bring relief. In doing so, however, we overlook the importance of starch as an article of diet. In addition, such albuminous diet is irksome and monotonous, and the patient loses weight. On the whole, it would be better to lessen the quantity of amylaceous substances than to forbid the use of them altogether. Intestinal antiseptics given with the idea of destroying the micro-organisms concerned or by lessening their power to produce fermentative changes have been found useless in my hands. The principal seat of trouble being in the intestine, and the use of antiseptics being attended with no advantage, we seek for some method of digesting amylaceous substances in the stomach, so that they may be absorbed by that organ and little or none reach the intestine. Our object can only be carried out effectually by means of a powerful diastasic ferment. The proper choice of a diastase is important. Many malt extracts contain much saccharine matter. This is mostly in the form of grape sugar, which, when eaten in large quantities, tends to undergo fermentation in the stomach, even when the secretion of hydrochloric acid is normal and commences in the usual course. Moreover, the normal processes of digestion are naturally slow, in order that the products of the digested food may present themselves slowly for absorption and so become available only as they are required for the support of the slow nutritive processes. If a quantity of predigested food be ingested there arises the risk that it will be rapidly absorbed into the blood and be rapidly excreted without having imparted any of its nutritive qualities to the tissues. In addition, too rapid absorption into the blood not only disturbs the equilibrium of that fluid, but also produces disturbance in the liver functions. This in all probability explains the reason of the biliousness produced in some individuals by the use of malt extracts. Naturally, we eat starch in preference to grape sugar, the starch being slowly converted into sugar in quantities with which the healthy organs can deal. None of these objections hold good in the case of the preparation called "taka-diastase," introduced by a Japanese chemist, and of all the preparations I have used to give relief in amylaceous dyspepsia I find none which gives such good results as those obtained by its use. Its action has been at once prompt and efficacious in the cases in which I have prescribed it, I being one of the number. Prior to the time at which it came under my notice I had used the various preparations of malt extract, but, whatever their value as nutrients and as vehicles for the administration of other preparations, I have found little gain attend their use in amylaceous indigestion. Our object is to convert the starchy matters of the food into maltose in the stomach prior to the onset of peptic digestion, and we have in this digestive agent a substance capable of fulfilling that object, for not only is its activity great, but it is said to produce its characteristic effects on starch immediately it comes in contact with the last-mentioned at the normal temperature of the body. The dose is 2½ grs. in tablet or powder, to be given at the commencement of a meal. It would be useless to speak favourably of the action of any artificial digestive ferment without at the same time emphasising the necessity for proper dieting. In these cases of amylaceous dyspepsia the starchy elements of the food should be properly cooked. Diastase cannot act on the starch granule unless the cellulose investment has been ruptured by the process of cooking, during which process the starch, under the influence of heat and moisture, swells up into a jelly like mass. Without this previous change starch is but slowly acted on by diastase. Proper mastication of the food is essential, so that the juices of the mouth may be thoroughly incorporated with the starchy elements of the food and salivary digestion be well begun before the food enters the stomach. Excessive use of saccharine substances should be avoided, for not only are they liable to undergo lactic acid fermentation, but they hamper the action of the ptyalin. The patient should be warned against the custom of taking quantities of fluid with the meal, on account of the tendency then present to wash the food quickly down instead of masticating it properly and mixing it thoroughly with the saliva. Fluids used at meal times should, therefore, not be sipped with the meal, the rule being to eat first and drink afterwards. Tea has an inhibitory effect on salivary digestion owing to the presence of tannic acid in the leaf. It should be made weak and used sparingly, and should, like other fluids, be taken after meals. A small quantity of bicarbonate of soda added to the tea in the teapot is said to neutralise the effect of the tannic acid. In conclusion, I would remark that in no case did I find taka-diastase fail in giving good results in amylaceous dyspepsia, and many of these results were obtained after a fair trial had been given to many diastasic and other preparations.

Belfast.

THE death is announced of Dr. William Jepson at the ripe age of eighty-five years, formerly a well-known and esteemed medical practitioner in the Salford division of Manchester, where he retired to Saltash, in Cornwall, in 1881. *Inter alia*, Dr. Jepson was an accomplished botanist and one of a small band who devoted leisure hours to collecting and arranging the wild plants, ferns, and mosses which were more abundant then in the moors and country around Manchester than they are at present. This pursuit, coupled with practical studies in chemistry, was continued at Saltash until failing eyesight and advancing years compelled a cessation. Dr. Jepson was at one time lecturer on botany at the Chatham street School of Medicine, Manchester.

THE SURGICAL TREATMENT OF ANKYLOSIS OF THE TEMPORO-MAXILLARY ARTICULATION.

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THE subject of ankylosis of the temporo-maxillary joint has received considerable attention from surgical writers, and many cases of operation for this condition have been reported. Like most procedures in surgery, these operations have a post-antiseptic history very different from that which they showed in pre-antiseptic days. Formerly, if the bone was divided and a false joint made, it was a not uncommon experience to have so considerable an inflammatory swelling and so much pain that the bones were fixed and held in apposition by the spasmodically contracted muscles, and when, finally, the parts were so far advanced towards healing as to permit of forcible motion being attempted, it was usually found that the ends of the bones were so fastened together that in spite of all endeavour the ankylosis returned and the case was no better than before. In attempting to obviate this difficulty extensive resections of the ascending ramus were undertaken in some cases, with the object of removing so much bone that the severed parts could not afterwards come together and unite. Of the operations devised upon this plan perhaps the most successful has been that of Esmarch, which consists in the removal of a wedge-shaped piece from the junction of the ramus and body of the maxilla through an incision just behind the angle of the jaw. In 1872, when surgery, stimulated by antiseptic teachings and results, was pushing forward along all lines, Bottini reported a case in which a good, permanent result was obtained by division of the neck of the jaw close to the articulation, and it was soon found that under aseptic conditions this method could be relied on to give a good false joint. Since that time these two plans, with occasional modifications by other operators,[1] have been rivals in the treatment of these deformities.

In considering these operations we must carefully distinguish between those cases in which the ankylosis is largely due to extensive cicatricial formations in the soft parts, as a result of noma, lupoid inflammation, or burn, and those in which there is a true bony ankylosis of the temporo-maxillary joint without involvement of the soft parts. When the jaws are bound by cicatricial contraction the section of the bone must be in front of the cicatrix, or at least must be so placed that the portion of the bone that is freed by the operation is no longer held by cicatricial bands. Necessarily, therefore, the division must usually be close to the body of the jaw, and for these cases Esmarch's operation is admirably adapted and obtains the best mechanical condition of the jaw possible under the circumstances. In the second class of cases, however, of true bony ankylosis it is plain that, other things being equal, the nearer the new joint is to the site of the old one the more nearly it conforms to the conditions on which the muscles were designed to act, and on which, *a priori*, they act best. In comparing, therefore, an operation which makes the section of the bone close to the old articulation with one which makes it at or near the angle of the jaw, we have to consider the former as the better operation, unless it has disadvantages either of danger, untrustworthiness, or unsightliness which more than counterbalance its mechanical advantages. My experience of the high section of the bone leads me to think it has none of these disadvantages, for in the seven cases in which I have operated in this way the mechanical result has been uniformly good, showing the trustworthiness of the procedure, and in none of them has the scar been unsightly. In all but one case it has been so slight as to readily escape observation at the end of a year. It is so placed that the hair can often be drawn forward over it and conceal it altogether. Paralysis of the orbicularis palpebrarum muscle was troublesome in two of the early cases, but finally disappeared. By keeping the incision close up to the zygoma this can be avoided.

I have met with no especial element of danger in these operations except that which is common to any operation upon an ankylosed jaw—namely, the danger of asphyxia under anæsthesia. In one case the breathing was stopped by the falling of the tongue into the throat, and a quick tracheotomy was performed. Recognising this danger, I have always had the tracheotomy instruments laid out during these operations, and this was the only case in which I had to use them. It is true that a case is reported in which the carotid artery was wounded, but this would have been avoided had the section of the bone been carried out inside of the periosteum in the manner I shall presently describe. My operation has been in the main after the manner of Bottini. It has been as follows. In the first place, to discover on which side the ankylosis exists is not always easy. Cases have been reported in which the sound side was operated on by mistake. To determine this point the history should be investigated, and often it will be found that the original osteo-periostitis which led to the ankylosis was distinctly limited to one articulation. The history is, however, often doubtful on this point, and a decision must be reached by an examination of the jaw itself. If the fingers are pressed in on the teeth upon each side, and at the same time the patient makes vigorous attempts at mastication, a springing of the bone on the free side will be noticed, in quite distinct contrast to the fixity on the ankylosed side. Furthermore, as there is usually a loss of cartilage and even of bone in the process which destroys the joint, the jaw naturally falls over to that side, and this lateral displacement may be readily made out by noting the relation of the middle lines of the two jaws as shown by the incisor teeth or otherwise. After a study of these several points a mistake must be exceedingly rare. In my first two cases I made the incision vertically over the neck of the jaw, but later I adopted Bottini's incision along the lower edge of the zygoma, with a vertical cut added if more room was needed. The vertical incision should not extend far down in front of the ear lest the facial nerve suffer injury, but it may run up over the zygoma. The incision is carried at once down to the bone, which is cleared by a periosteum elevator. The division is then made with a chisel, which cuts out a wedge across the whole width of the bone which represents the neck of the jaw, even when this is a mass involving both the condyloid and coronoid processes. With care this division can be kept within the limits of the periosteum, and all danger of injury of the carotid artery is thereby avoided. To ensure safety a curved retractor may be carried under the posterior edge of the bone during the use of the chisel, thus wholly obviating any danger of injury to the vessels lying there. In none of my cases has the internal maxillary artery even been injured. When the bone is completely divided the final separation may be accomplished by pushing a wedge-shaped screw gag into the cleft in the bone and so forcing it apart. The ends of the bone are then readily rounded off with rongeur forceps. The hæmorrhage is trifling and the wound may be tightly closed. A cork should be kept between the teeth on the injured side for the first week or fortnight while the healing is going on, but may be taken out as often as is desired for passive motion after the first three or four days. The following is a brief summary of the seven cases on which I have operated.

CASE 1.—A girl, aged thirteen years, suffered from ankylosis of the left temporo-maxillary joint for ten years the result of scarlet fever. She was operated upon in August, 1887, the neck of the condyle being chiseled through just below the point where it became welded into the temporal bone. This was done through a vertical incision about one inch in length. Slight loss of power over the eyelid supervened, but this disappeared after a few months. The patient was seen on Jan. 19th, 1895, eight years after the operation. At that time the scar of the incision was barely visible. She noticed that to tightly close the left eye required more effort than in the case of the other, but the ordinary movements of the eyelid were perfect. The left side of the jaw was somewhat undeveloped as compared with the other. The mouth opened three-fourths of an inch,

[1] Dr. J. E. Mears has reported an operation through the mouth in which he saws the ramus through on a level with the last molar tooth, and after separating the attachment of the temporal muscle he seizes the bone with lion forceps and forcibly twists it out. If it yields at the neck the condyle may be chiseled out and left. This method would not seem to be applicable for those cases in which both condyloid and coronoid processes are welded firmly to the bones of the skull, a condition not always discoverable before operation. The slight scar of the external operation makes it of less importance to attack the bone at a disadvantage within the mouth; and in the cases to which Dr. Mears's operation is applicable it removes more bone than is necessary, and has in that way a mechanical disadvantage. The results that Dr. Mears has figured are certainly very good.

and there had been no change in this since just after the operation. Lateral motion was considerable, one-quarter of an inch or more, and the grinding power was good.

CASE 2.—The patient, a girl aged seventeen years, had ankylosis of the left temporo-maxillary articulation of thirteen years' standing, which followed mastoid disease caused by scarlet fever. She was operated on in July, 1888. The operation was begun with a vertical incision, but as it was found that the coronoid process was also involved in the mass of bone welding the maxilla to the temporal bone a cross incision was made along the lower edge of the zygoma. This patient was examined on Jan. 9th, 1895, eight years after the operation. The scar of the operation was not very noticeable, and she said that its appearance had caused her no annoyance. When her mouth was widely open the gums were ⅝ in. apart, and with her plates of teeth in place she could open her mouth half an inch. The mastication was vigorous and she had capital grinding power. The eyelid had good motion.

CASE 3.—A woman, thirty years of age, fell when three years old, striking her chin, and this was soon followed by ankylosis of the left temporo-maxillary joint. Forcible attempts to separate the jaw with wedges accomplished a bending of the body of the lower jaw, so that while the molars and even the gums in the back part of the mouth were in close apposition the incisors were about one-half a centimetre apart. An operation was performed in April, 1889, in the manner followed in Case 2, and here, too, the welding of the jaws to the temporal bone was by a thick irregular mass of bone. Some temporary paralysis of the eyelid followed the operation. This patient was seen on Jan. 14th, 1895. The motions of the jaw were well preserved and the grinding power was excellent. When the mouth was open the aperture between the teeth measured between three-quarters of an inch and an inch. The scar of the operation was practically invisible, it being difficult to determine, except by close inspection, which was the side of the operation. While the motions of the eyelid were perfectly preserved there was a perceptible difference between the action of that side of the face and the other. This was mainly noticed when laughing, and consisted in an excessive action of the muscles around the eye on the affected side rather than in any lack of power in them. This was so slight as not to be annoying.

CASE 4.—A woman, aged thirty-two years, received a blow upon the jaw when six years of age. This was soon followed by ankylosis of the right side of the jaw. An operation was performed on Dec. 13th, 1889. The incision was made just beneath, and parallel to, the zygoma and was crossed by a short vertical incision through the skin alone. The condyloid and coronoid processes were both welded to the skull by an irregular mass of bone. This was chiseled through. She left the hospital well on the thirteenth day after the operation. The patient was seen in Dec., 1894. At that time the scar of the operation was barely visible. The motions of the jaw were good. The mouth opened a little over an inch and there was good grinding power with lateral motion of a quarter of an inch. The motions of the eyelid were perfect.

CASE 5.—A woman, aged twenty-six years, suffered from ankiyosis of the tempero-maxillary joint, which had followed a blow on the chin in infancy. An operation was performed on July 15th, 1890. The first incision was beneath and parallel to the zygoma, with a short cross incision through the skin. In the midst of the operation the patient became asphyxiated owing to the dropping of the tongue back into the throat. An immediate tracheotomy was performed and the chiseling of the jaw was then finished. The wound suppurated, owing, no doubt, to some contamination of it after the tracheotomy. Still, the recovery was not seriously interfered with and the patient left the hospital twenty-three days after the operation. This patient was seen on Jan. 7th, 1895, four and a half years after the operation, when the possible separation between the incisors was an inch. Lateral motion was one-quarter of an inch. The grinding motion was good, but the grinding was interfered with by the irregular arrangement of the molar teeth, which did not properly correspond in the two jaws. The scar was slightly depressed, but not unsightly. Movements of the eyelid were not in any way interfered with.

CASE 6.—A boy, aged eight years, had scarlet fever when six years old. Otitis followed, and rapidly progressing ankylosis of the jaw occurred. When seen the jaw was fixed by bony ankylosis, with the teeth immovably in apposition. He was operated upon on Jan. 15th, 1890. A short incision was required as the condyloid process alone was fixed to the temporal bone, and the section and removal of the neck of the jaw was easily performed. The wound healed by first intention, and he left the hospital in nine days. He was seen two years later with perfect control of all the motions of a mouth which opened as widely as in any boy of his age. He had perfect grinding power.

CASE 7.—A woman, thirty-seven years of age, when she was aged seven years, received a blow on the right cheek, followed by much pain about the ear, with gradual closure of the jaws, so that at sixteen years of age they were tightly approximated and fixed. Forcible efforts with wedges accomplished a sufficient separation to allow of the food being pushed between them. She was operated upon on July 19th, 1891. The incision was made parallel to, and close under, the zygoma. As in all but two of my seven cases, the upper end of the ramus was welded to the skull by a large irregular mass of bone which was chiseled through. The recovery from operation was uneventful. This patient was seen on Jan. 8th, 1895. She had had all the lower teeth but one molar drawn, and had not yet had a plate made. There was a distinct downward bend in the body of the lower jaw as a result of the long-continued wedging which had preceded operation. As a consequence of this, the anterior gums did not closely approach the upper teeth, being held apart by the last remaining lower molar. The jaws could be separated an inch, and there was fairly good grinding motion, as appreciated by the rubbing to and fro of the solitary lower molar against the upper range of teeth. The scar was not conspicuous and the motions of the eyelid were good, though she said that when she was tired or nervous she was somewhat troubled by twitching of that eye.

The first two of these cases were published in the Transactions of the American Surgical Association (vol. vii.), the others have never been reported. The restoration of motion in all of these cases was thoroughly satisfactory, and has been maintained now for a sufficient number of years in each case to warrant the belief that it is permanent. It is particularly worthy of note that the grinding power was recovered in every case. In Cases 1 and 6 the division was through the neck of the condyle, so that all of the masticatory muscles retained their proper relations, except the external pterygoid, which was separated from its attachment. In the other cases the coronoid process was involved in the ankylosis, so that in them the attachment of the temporal muscle was also lost. The masseter and internal pterygoid muscles were in no way interfered with, and gave ample support and power to that side of the jaw.

A review of the literature of the subject has yielded reports of sixty-two operations upon cases of bony ankylosis of the tempero-maxillary articulation, and the five hitherto unreported cases of the writer bring this number up to sixty-seven. Of these, forty-seven were done by Bottini's method and twenty were done by other methods involving a section of the jaw through the ramus at some point nearer the angle. These figures would seem to show a preponderance of surgical opinion in favour of the operation close to the zygoma. A careful comparison of the functional results by the various operations is impossible on account of the incompleteness of many of the reports in this regard. As far as could be judged, however, the method of Bottini furnished better power of motion than any of the operations near the angle. This search into the experience of others has thus confirmed the opinion which the writer formed from the study of the mechanical principles involved and of the final permanent results in his own cases, and has led him to consider the operation devised by Bottini to be the best one known, up to the present time, for the relief of this most distressing deformity.

The following references to the literature of the subject, which are all that a rather thorough search has yielded, may be of service to future investigators.

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POINTS OF POSSIBLE MEDICO-LEGAL INTEREST IN CERTAIN CASES OF DISSEMINATED MILIARY TUBERCULOSIS.

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IN disseminated miliary tuberculosis there may be doubts as to the medico-legal aspect of the case during life, the doubts being afterwards completely cleared up by a post-mortem examination; but in other cases points of medico-legal interest may first attract attention at the time of the necropsy. Instances of the first class are sometimes afforded by tuberculous meningitis supervening in adults. The following is an example.

CASE 1.—A German, aged nineteen years, was brought to the German Hospital suffering from fever and delirium. He could answer no questions and there was no history obtainable. The physical signs were not quite the same over both pulmonary apices and this caused tuberculous meningitis to be suspected. There was, however, much albuminuria—a condition not usually associated with tuberculous meningitis—and neither ophthalmoscopic examination nor special nervous symptoms helped us. It was therefore possible that the patient had taken some poison acting on the kidneys and nervous system. He died some days later, and the post-mortem examination cleared up the diagnosis. Tuberculous meningitis was found, together with old and recent tubercle in the lungs, and miliary tuberculosis of the mucous membrane of the glottis. The kidney affection was parenchymatous, probably due to the bacillary toxins which had to be excreted.

Cases of tuberculous meningitis in adults are probably not rare in which, if there were absence of past history, a temporary suspicion of poison or foul play might be entertained. In the foregoing case the absence of past history and the presence of much albumin in the urine led to doubt in the diagnosis. In such cases the doubtful points are cleared up by the post-mortem examination. It is, however, the second class of cases to which I wish to draw attention—cases of disseminated miliary tubercle in which pathological questions of medico-legal interest occur at the time of the necropsy. Their importance arises from the fact that a blow or injury to quiescent tuberculous nodules in any exposed region of the body may give rise to acute miliary tuberculosis of the lungs, thus bringing about death in persons previously in apparent health. The following is a typical example.

CASE 2.—A well-built man, a German, aged thirty-three years, was admitted under my care at the German Hospital on April 5th, 1897. He had fever (temperature 103·6° F.), vomiting, great dyspnœa and cyanosis, intense dryness of the throat, and scanty expectoration, in which a trace of altered blood pigment was at one time visible. On examining the lungs no definite signs of consolidation could be made out, but a certain amount of fine inspiratory crepitation was heard over both sides, and the case seemed to be one of acute double pneumonia before the outer parts of either lung had become hepatised. The history was that ten days before admission, when on board ship on his way back from the Transvaal, he received a blow on the left testis, which was followed by local and general symptoms. After five days his condition improved somewhat, but two days previously to admission he had a rigor and pains over the whole of the body. Except for some slight improvement soon after admission, due to rest and cessation of the vomiting, his condition underwent but little change. The dyspnœa and orthopnœa increased and the fever remained continuous till he died, practically suffocated, on April 20th, about twenty-five days after receiving the blow on the testicle. In the meantime, owing to the absence of any crisis, and since there were no signs of definite hepatisation of the lungs, we had come to suspect that the pulmonary disease was one of acute miliary tuberculosis. The crepitations were variable; on one occasion distinct inspiratory crepitations could be heard below both clavicles. The sputum was examined for tubercle bacilli with negative results. The urine contained a little albumin. At the necropsy both lungs were found to be engorged with blood and absolutely stuffed with miliary tubercles. There was some fibrosis from earlier disease at both pulmonary apices. The bronchial lymph glands were enlarged, and besides miliary tubercles in the pleuræ there was evidence of older pleurisy, especially over one lung. The left epididymis (i.e., where he had received the blow twenty-five days before his death) contained a softened, caseous nodule, smaller than a small cherry. The cerebral meninges contained no tubercles, nor were tubercles found in any other organs, except a few minute ones in the renal cortex below the capsule. The liver might, of course, have contained microscopic tubercles though no macroscopic ones were found. The heart was distended with blood, but showed no evidence of disease. The spleen was somewhat enlarged and pulpy; it weighed nine ounces and contained one small white infarct.

In this case I think there can be no doubt that the tubercle spores were by the injury set free from the old caseous focus in the epididymis, and were carried by the venous blood to the right heart. Many of the spores were then caught up in their passage through the lungs, and thus gave rise to the miliary pulmonary tuberculosis. This theory amply explains why the pulmonary tubercles were practically all about the same size, why they were uniformly distributed throughout every part of the lungs, and why there was not evidence of general miliary tuberculosis in other parts of the body. A few of the microbes had, however, certainly passed through the pulmonary circulation, otherwise we should have found no miliary tubercles in the kidney. Moreover, by careful microscopic examination we might have found evidence of commencing tubercles in other organs.

Similar cases were observed prior to the discovery of the tubercle bacillus and gave rise to various inquiries as to the possible relation between the injury and the lung disease. A remarkable example was the following, which I have from my father, and which occurred at Bonn about 1849.

CASE 3.—An apparently healthy student about twenty-one years of age, received some injury to one of his ankle joints. Shortly afterwards he fell ill with an acute pulmonary affection, characterised by frightful dyspnœa and cyanosis, and, like the previously mentioned patient, died practically from suffocation about twenty-five days after the injury to his ankle. At the necropsy both the lungs were found completely stuffed with miliary tubercles, and in the ankle some caseous material was found. It was known that during childhood the patient had suffered from a disease of his ankle.

Other examples, though perhaps not quite so typical as the two foregoing, cannot, I think, be very rare—i.e., cases in which acute miliary tuberculosis of the lungs is set up by injury to some exposed part of the body which happens to be the site of previous tuberculous disease. The wonder is that such cases are not more often observed. I have not, however, heard of any case which has led to legal proceedings of any sort, though one would expect to hear that the question has frequently occurred in connexion with the foreign systems of workmen's insurance. Fortunately in Case 2 the injury which started the tuberculous dissemination was probably of a purely accidental nature.

Harley-street, W.

HEADACHES:

A STUDY OF SOME COMMON FORMS, WITH ESPECIAL REFERENCE TO ARTERIAL TENSION AND TO TREATMENT.[1]

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I PROPOSE to set forth some of the commoner types of headache, arranged in the order of the period of life to which they belong. As the subject is large and its literature extensive I must confine myself to my own observations, which have been made chiefly upon out-patients, and these mostly women and children. My object is to inquire how far the common forms of headache are dependent upon states of general blood-pressure, and by what means they can be relieved. In infancy we can say little as to headache, yet sometimes the unappeased cry and the action of putting the hands to the ears or hair tell us with much probability of its presence. During childhood the chief causes of headache are school pressure and the rheumatic poison. The latter will come before us in connexion with a later age. School headaches are common among the children attending the public elementary schools. The boy or girl is subjected to mental stimulation under bad physical conditions—crowded insanitary homes, poor or scanty food—and the result is a frequent headache. The pain is usually frontal, worse on exertion, relieved by lying down or going into the open air; in severe cases it persists at night and may hinder sleep. When the rheumatic tendency is also present the proneness to headache is much greater. There is generally increase of arterial blood tension. Here let me say that in my experience the determination of the blood tension is not always easy. The pulse may tell us much, rather, however, by its sustained character between the beats than by incompressibility of the beats themselves. But the true tension of the pulse is often difficult to appreciate. Accentuation of the second sound of the heart, as heard over the aortic orifice, is a more certain sign, although here the observer must be mindful that a thick or thin chest wall, retracted lung, or stiffened aortic valves may greatly modify the sound. It is useful to listen also over the carotid arteries at the base of the neck. Headaches due to defects of eyesight must not be confounded with those from school pressure. The best remedies for school headaches are, in my experience, rest and cod-liver oil.

In adolescence and young adult life there are many kinds of headaches prevalent. There is, first, the rheumatic headache—i.e., that which is associated with acute or sub-acute rheumatism or with a well-marked rheumatic habit. The subjects are children or young adults. The pain is generally frontal, often felt on waking in the morning, and almost always worse in the early part of the day. The heart is over-acting, with a loud second sound in the pulmonic area. There is increased vascular tension. The headache is relieved by salicylates and alkalies; if any specific remedy for the pain is required antipyrin has been found effective. Closely associated with the rheumatic headache is that due to over-action of the heart. This is also a condition of plus tension, and must be distinguished from rapid heart (tachycardia) where the tension is lowered. The heart's action is increased, not only in rate, but in force; the impulse is strong, the sounds loud, and especially the second sound, as heard on both sides of the base of the heart. The subjects are often rheumatic, so that a clear distinction between these two classes of headache cannot always be drawn. The site of the pain has seemed to be more varied than in the simply rheumatic headache; often it affects the vertex, and it is sometimes worse in the evening or in the night. Vertigo is common and there may also be tinnitus aurium. Rest, iodide of potassium, and alkalies are the remedies indicated. A third large class of plus-tension headaches in young persons is found in connexion with anæmia. The throbbing or shooting frontal headache is typical of anæmia, but the site may also vary a good deal. Constipation is generally present. The remedies for the pain are those for anæmia—purgative salines and iron—and the presence of the headache need not deter us from giving iron if adequate saline treatment is used. This brings us to constipation headaches in general, still showing increased blood tension in the vessels. Constipation may cause pain in the head at all periods of life. The pain is more often referred to the forehead than elsewhere, but in many cases the vertex is spoken of, or other parts of the head. Vertigo is often complained of. Many of these cases are complicated by rheumatism or senile vascular changes. Albuminuric headaches also belong to the series of high-tension headaches. In a few cases I have observed the top or back of the head was mostly affected, and the pain, unlike that in most of the classes already mentioned, was not usually relieved by the recumbent posture at night, but was then as bad or worse than in the daytime. Migraine forms a very important class and will detain us a little longer. I understand by migraine a periodical nerve storm, the typical paroxysm consisting in severe pain in one brow or temple, giddiness, nausea, often vomiting, and sometimes disturbances of special senses, such as hemiopia or transient blindness, vibratile spectra, numbness of parts of the surface, &c. The pain is in some cases symmetrical. Such attacks occur at any age from childhood onward, but are less common after the climacteric period. In the majority of my cases the arterial tension has been increased, but in one notable case it was not so; this was the worst case I have ever seen, the attacks were very frequent and severe, reducing the subject, an intelligent professional man, to misery, and in his vessels the blood tension was very low. Instances of megrim are common in women with a gouty inheritance, and whose urine is over acid, often laden with urates, and depositing uric acid crystals. Such women have increased vascular tension and their catamenia are profuse. They are liable to strange pains, which puzzle their medical attendants, in the back, the side, or about the sternum. In the treatment of migraine we must, in the first place, deal with the patient's general condition. Saline purgatives, a mild mercurial course, potassium iodide, sodium salicylate, or alkalies are often indicated. There are generally bad habits of diet in these cases needing to be set right, also want of exercise, constipation, &c. For the relief of the paroxysms antipyrin and phenacetin have often been in my experience successful. Alkalies sometimes induce the attacks, perhaps by rendering the uric acid in the tissues soluble. But I am accustomed to rely much upon cannabis indica, having had a pretty large experience of this remedy. The extract, often combined with cascara sagrada, has controlled many, if not most, cases of migraine. The co-existence of a tendency to menorrhagia is a further reason for the use of Indian hemp. But it is a remedy which requires careful adjustment for each case, both from the varying susceptibility of different subjects to its influence, and I think also from the varying strength of the drug itself. I prefer to use the fresh extract, and have in a good many instances given it to the point of intoxication. This, however, does no permanent harm. In the case of a woman convalescent from acute lung catarrh attacks of migraine were occurring daily; one-fourth of a grain of the extract was prescribed, and she took by mistake two doses at once, half a grain in all; intoxication followed, as shown by strange delusions, and unconsciousness for two hours. On recovery she remained free from headaches for ten days. In another case the dose of the drug was gradually increased to seven-eighths of a grain, and then, a hearty meal following the administration, symptoms of intoxication came on, with hysterical excitement. The patient declined further use of the remedy, but was persuaded later to resume it, and the attacks of migraine were both distant and slight when she persevered with it. In a third case nearly half a grain used to cause some symptoms of intoxication when taken upon an empty stomach—"pins and needles," stupor, and strange feelings being complained of; but these were delayed for three or four hours when the dose was taken after a full meal. In the case of severe migraine alluded to with low blood tension cannabis only aggravated the patient's sufferings—I believe it is useless except for high-tension states—nor did caffeine, bromides, or salines help him, and change of air brought only a short respite. The patient left me unrelieved. I heard of him a year later; he had consulted other physicians, but the attacks continued much the same.

I have notes of about a dozen cases of epilepsy in which headache was a prominent symptom, but it varied much in site and other characters; in several of the cases the pain

[1] Introduction to a discussion at the Hunterian Society, April 28th, 1897, vide THE LANCET, May 8th, 1897, p. 1275.

was worse in the evening or during the night. With regard to neuralgic headaches, besides those which are localised in the area of a cutaneous nerve on one side of the head and some of which are reflex to ocular, dental, or nasal conditions, there are a few cases upon my list of severe habitual headache of long standing in women which do not seem to fall under any other category. The pain was in the back of the head and nape of the neck, coming forward over the vertex. There was plus tension in the arteries. Relief was obtained from cannabis, with alkalies or salines.

I now pass to some forms of headache, still in younger adult life, in which the arterial tension is lowered. The principal of these is the headache associated with tachycardia, or heart-hurry. This condition may be contrasted with that of the over-acting heart previously alluded to. The heart contractions are in both frequent, more so in tachycardia, but whilst the over-acting heart beats forcibly against tense blood-vessels, in tachycardia the beats are simply quickened, the second sound is weak, and the vessels are relaxed. The breathing is quickened, the skin perspires inordinately, and there is incapacity for much exertion, physical or mental. Graves's disease may be looked upon as tachycardia in its full development, but all degrees of the condition in a slighter form are very common—more common, I venture to think, than used to be the case. The headache of heart-hurry is again various in its location, frontal, vertical, posterior, or several of these combined. The head is often flushed or hot, and the pain is commonly worse at the catamenial epochs; it is usually relieved by quiet, by recumbency, and by drinking tea. Caffeine quells some of these headaches, and the iodide and bromide of potassium relieve others. Headache in alcoholic subjects may be coincident with plus or minus blood tension. When it is due to the direct action of alcohol the vessels are relaxed, the tension is low, and the condition is closely similar to that of tachycardia. On the other hand, the indirect and remoter effects of alcohol, by hindering elimination, increase the blood tension and contribute a large quota to the plus tension headaches of middle life, which we shall consider presently.

There is a well-marked type of headache which may be termed congestive. The head is flushed and hot, and the carotids often pulsate visibly, whilst the hands and feet are cold; the pain is frontal, or all over the head when severe, and is described as bursting, throbbing, beating, or shooting in character; it often begins on rising in the morning and is worse after exertion or meals. The subjects are well nourished, and in women the catamenia are scanty or absent. The blood tension, contrary to what might at first sight be supposed, is somewhat diminished. This form of headache seems to be very well relieved by caffeine. One woman, aged twenty-three years, came again and again during many months for her five-grain doses of the citrate of caffeine. "It seems," she said, "as if I cannot do without the medicine; I get relief half-an-hour after I take it." Caffeine is the most useful remedy we have for low-tension headaches. Antipyrin and phenacetin relieved some of the cases. Mention may here be made of the headache due to cough. It is, I think, of much the same type as the last; the pain is frontal or vertical and the head is hot. The blood tension is doubtful; sometimes, if not generally, lowered. Observations on this head are complex; in one case the tension was usually increased, but during a paroxysm of cough it was diminished and the vessels relaxed. The headache of influenza and of enteric fever belong also to the low-tension class.

Going on now to the headaches of middle life, it will be convenient to speak here of those attendant upon heart disorders, although many of these are found also at earlier ages; those belonging to old age will be considered later. My records of heart cases are too few to enable me to draw many conclusions. In the early stage of rheumatic heart disease, with or without slight valvular lesion, the vascular tension is generally heightened, and headache is very common. It may be thought that mitral regurgitation must lower the tension; when the reflux is large it probably must do so, but in my experience a small leak may coincide with tightened vessels. The site of the pain may be in any part of the head, and the headache is much the same as that already described under the heading of rheumatic. Cannabis relieves some of these cases. Headache occurs also in the latter stages of mitral disease when the tension has sunk; it attends also, often severely, aortic incompetency. Mitral stenosis caused a characteristic headache in six well-marked cases. It was generally located at the vertex, often throbbing in character, came on on waking or rising, and was increased by exertion or by taking food. This headache was relieved, as is usually the case, on lying down; on the other hand, I have noted several cases of feeble, irregular, or irritable hearts, with headache aggravated by the recumbent posture. We shall see that this is very often the case with the high-tension headache of old age. Menorrhagia is commonly attended with headache, generally frontal or vertical and throbbing. I think the blood tension is most often heightened. Cannabis indica is especially indicated. Arterial tension is apt to rise during the middle period of life. The causes of this change, as they are seen in the well-to-do classes, are quite familiar—over-eating, alcohol, sedentary habits, and the gouty constitution. From these it results that the blood becomes charged with effete matters and the vessels thickened, the heart usually hypertrophies, and for long no serious difficulty hinders the due circulation of the blood. In the poorer classes another set of causes are at work—bad air, scanty and poor food, long hours of manual labour, shortened rest, and chills. These depressing causes generally, in my belief, lead to contraction and thickening of the arteries, or, I would say, to premature age of the vessels; for among the poor, at least, degenerated vessels are among the normal results of old age. Then arises the question, Will the heart hypertrophy in response to the greater pressure against which it has to act? In many cases it does so, but in others it fails to hypertrophy because its tissues are badly nourished and there is general lack of strength. Instances of this condition are often to be seen amongst the poor in broken-down, middle-aged men and women. The vessels are thickened, but the heart is dilated and feeble, with weak second sound; there is asthenia and short breath, and the pulse has nearly that character described by Broadbent as "virtual tension." Headache is very common amongst the gouty and those whose excreting organs are working ill—a high-tension headache, to be relieved by mercurial purgatives, salines, alkalies, potassium iodide, and perhaps cannabis. The poor with their high tension bred of want and fatigue suffer perhaps less in headaches, nevertheless many such cases have come before me. I shall refer to this again in connexion with old age. There is, however, one class of headaches in middle life of a kindred type to the foregoing—that which affects women about the climacteric epoch. The pain is commonly referred to the vertex, and is often spoken of as bewildering or as aggravated by noise or worry; vertigo is frequently complained of. The blood tension is increased. In other cases which showed symptoms of hysteria or mental depression, with headache, at this epoch the tension has been noted as lowered.[2] Bromides are the most useful drugs; cannabis relieves some of the cases.

It remains to speak of the headaches of old age. The poor age early; at fifty-five they are old, at sixty or sixty-five thickened vessels, tortuous temporal arteries, thin and wrinkled skin, and arcus senilis tell that the full age of the Psalmist has virtually been reached; and it is by reason of strength if they compass seventy years or seventy-five. Amongst over 12,000 patients at St. Luke's Dispensary I have not seen probably half-a-dozen over eighty years of age. The blood now circulates through inelastic tubes, no longer with the easy flow of health—a stronger propelling force must urge it forward. The heart responds and hypertrophies; there is heightened tension. But as the vascular changes go on there comes a time when the heart muscle can no longer easily meet the strain. There is increased action, making up in frequency of beat for the lessened power; there is præcordial distress and bad breathing. This condition is well described by Balfour in his book, "The Senile Heart"; also by Clifford Allbutt. Again, the heart may be vanquished in the strife, its cavities may dilate, and its action become rapid and irregular, with low tension in the arteries. And life may yet be prolonged for years, but it is life at a lower level, the sum of the action of feeble organs, when the flowing blood stream has fallen to a mere brook, meandering through the marshy tissues. Now whilst the tension is increasing monthly and yearly it is not to be thought that the various organs can work in comfort. Amongst the symptoms of

[2] Sir W. Broadbent states that high tension is the rule in melancholia. In the hystero-mental depression of the poor I have often found it lowered.

dis-ease headache is common, in site frontal, vertical, or posterior, often throbbing, and apt to be worse in the night. One patient has "dreadful sensations" in the head at night, another is awakened daily by the pain at 3 A.M., and it lasts until near tea-time. When the heart is distressed and labouring against pressure these pains become in some cases violent, "splitting," burning, and especially affect the night time, hindering due sleep. The bowels are almost always costive, the hand is shaky, and the last joints of the fingers are enlarged (Heberden's nodes). Headache is also common in the last stage of senile heart, when the blood tension is low, the heart dilated, and its action irregular; there are also giddiness and often faintings. The treatment of these headaches is that of their associated heart conditions. Mercury is perhaps our sheet anchor in the relief of the high tension of old age; salines and potassium iodide are of like help. I once gave nux vomica to a person aged eighty-eight years with thickened vessels. She begged it might be left off. "It strings me up so, sir; I cannot bear it." As has been well said, Epsom salts are the best tonic for the aged. A woman, aged fifty-seven years, came to me six years ago; she had chronic bronchitis, dilated heart, breathlessness, and œdema of the legs. I thought she was past cure, but sent her to bed and ordered her to take a course of sulphate of magnesia and grey powder. She came in recently, to my surprise, having lived in tolerable health these six years. "Ever since," she said, "you told me to take the salts I have flown to them whenever I was down; nothing ever does me as much good as the salts." I believe she is right; the saline has eased the vessels and given the heart time to hypertrophy, as it has done. In the low-tension headache of failing heart power digitalis, strophanthus, and the like are of chief use.

The chief points I have sought to bring forward are these:—1. The state of the arterial blood tension is an important factor in many forms of headache. Increased tension is the rule, but there are some well-marked types of low-tension headaches. 2. In the treatment of headache the first thing is to treat the cause or the disorder which is associated with it. 3. The remedies which lower the general blood tension are often useful for high-tension headaches, and those which raise tension for the low-tension forms. 4. Of specific remedies, cannabis indica is of value in most high-tension headaches and caffeine citrate in many of those of low tension. Antipyrin, phenacetin, and acetanilide may be useful in both, but chiefly when the tension is high.

Finsbury-square, E.C.

A CASE OF

PUERPERAL SEPTICÆMIA TREATED WITH ANTI-STREPTOCOCCIC SERUM; DEATH.

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MANY cases of septicæmia, puerperal and otherwise, have now been published in which the use of antitoxin has been followed by extraordinary recoveries, but I have seen few in which antitoxin has been tried and apparently failed. As negative results in such matters are as important, though not so gratifying, as positive ones, I offer the notes of the following case, in which serum treatment was begun three days after the onset of the disease and was continued until the patient was moribund, the case going steadily downhill all the time. On the only other occasion when I had the opportunity of trying anti-streptococcic serum the result was the same, but in that case the treatment did not have a fair chance, as it was not begun till twelve hours before death.

A primipara, aged twenty-four years, was admitted, on Aug. 24th, 1896, into the General Lying-in Hospital, Lambeth. Pregnancy had reached full term, and the patient was said to have been in labour for fifty-four hours. On the evening of admission an unsuccessful attempt had been made to deliver with forceps in the patient's own home. On admission to hospital the patient was in good general condition, showing no constitutional symptoms or local signs of obstructed labour. Fairly strong pains were occurring every ten minutes. The fœtal heart was 156. Pelvic measurement showed a slight degree of general contraction, thus:—Distance between the iliac spines, 9½ in.; distance between the iliac crests, 10½ in.; external conjugate diameter, 7 in.; diagonal conjugate diameter, 4¼ in.; and true conjugate diameter (measured after labour), 4 in. Immediately after admission a vaginal douche of perchloride of mercury (1 in 2000) was given. Two hours later chloroform was given and forceps applied. There was no unusual difficulty about delivery; the head was brought from the brim to the perineum in half an hour; there were no lacerations. The child, weighing seven and a half pounds, was born alive. The placenta was expressed from the vagina. The total amount of hæmorrhage during and after labour was twenty ounces. After delivery the uterus and vagina were very thoroughly douched with perchloride of mercury (1 in 2000). A little later the temperature was 99·2° F. and the pulse was 84. On the 25th, twelve hours after delivery, the temperature was 103·6° and the pulse 120, no rigor having occurred. On the 26th the temperature varied from 101·4° to 104·2°, the pulse from 122 to 140, and the respirations from 28 to 36. The patient was sweating freely and had a headache, but no rigors. In the evening there was found to be some superficial sloughing of the lower part of the vaginal wall and vulva posteriorly. The lochia were normal in appearance, odour, and quantity. The vagina was douched with creolin and the vulva powdered with iodoform. Four ounces of brandy per day were ordered. The appetite was good and the patient slept well at night. On the 27th the patient was bright and cheerful, the temperature varied from 102·4° to 103·4°, the pulse was 126, and the respirations were 28. The bowels were very freely relieved twice; the tongue was clean; there were no signs of pneumonia, pericarditis, or peritonitis, but the heart's apex was felt one and a half inches outside the nipple line and hæmic murmurs were heard at the base; the lochia were still normal; the breasts were flaccid. The dose of brandy was increased to six ounces, and digitalis and caffeine were ordered. In the evening a little chloroform was given, and the uterus was scraped with a blunt flushing curette; only a few shreds came away. During the operation creolin (1 in 200) was flowing through the curette; afterwards a quart of plain water was run through the uterus, and this was followed by two quarts of perchloride (1 in 4000). After the curetting the temperature suddenly fell to 97·8° and the respiration became infrequent and sighing, but the pulse was 100 and of good volume; the extremities were warm and there was no increase of pallor. The patient only slept two and a half hours. On the 28th the patient was still very bright and cheerful. The temperature gradually rose during the morning to 103·2° and the pulse to 120. At noon the uterus was douched with perchloride, when the vagina was looking better than it had done before. At 2 P.M. 9 c.c. of streptococcic antitoxin were injected. In the evening the patient was seeming a little better in herself, but the pulse was intermittent. The temperature was 102·8°. The uterus was douched with perchloride, when a few sloughs came away and the vagina looked much more healthy than before. A further 9 c.c. of antitoxin were injected. The patient slept for two hours after half a grain of morphia. On the 29th the patient said that she felt better, but she looked worse, and certainly was so. The temperature varied from 102° at 2 A.M. to 98·6° at 10 A.M., twenty hours after the first dose of antitoxin; the pulse was generally 136, but very variable in rate and very irregular. The tongue was slightly furred but moist, and the appetite was good. Two liquid offensive motions were passed. The lochia were normal, but diminished in quantity. The dose of brandy was increased to twelve ounces. Antitoxin was injected at 1 P.M. and again at 9 P.M., but no fall in temperature occurred. Digitalis, strychnine, and caffeine were given hypodermically. In the evening the patient complained of intense pain in the back, which persisted almost without remission till her death, and was unaffected by morphia. She slept a very little after the administration of one grain of morphia. On the 30th the temperature ranged from 100·4° to 101·4°; the pulse was 200. A cadaveric odour was present. The patient scarcely slept at all at night, in spite of morphia, which was given hypodermically in doses of half a grain, until three and a half grains had been given in eight hours. On the 31st the temperature was 103·4°. The pulse was 208 and scarcely perceptible at the wrist. She was not in pain for a short time in the morning. She asked for solid food at dinner-time and ate a quarter of an ounce of cold beef and an ounce of mashed potato and drank half a glass of ale. In

the evening she ate a whole pear with avidity. There was twitching of the supinators of the left arm. On Sept. 1st the movement of the abdomen on respiration was a little impaired, and there was slight resistance in the left flank. In the evening the twitching increased, hiccough occurred, food was refused, and the patient died at midnight.

Necropsy.—Post mortem the top of the uterus was found to be one and a half inches below the umbilicus, and the weight of the uterus was 14 ounces. There was no general peritonitis, but on the left half of the posterior aspect of the uterus the peritoneum was injected. Douglas's pouch contained about two drachms of free pus. There was no recent lymph or adhesions. Inside the uterus was some blood-stained thin pus, but no retained membranes or placenta. When the pus was sponged off the surface appeared healthy. The upper part of the vaginal walls was healthy, but contained pus like that in the uterus. There was some sloughing of the lower part of the posterior vaginal wall and the posterior part of the vulva. The true conjugate measured 4 in. and the transverse diameter of the brim was 4½ in. There was no thrombosis or pus in the iliac veins. There was no endo- or peri-carditis. The lungs, pleuræ, and spleen were natural.

Remarks.—Apart from the antitoxin treatment there are some interesting points in the case. It is somewhat unusual for so acute a septic process to be unaccompanied by any rigors. The case is a striking example of the extreme value of a high pulse rate in the diagnosis of puerperal fever. It is not uncommon during the first days of the puerperium for the woman to get a rise of temperature and headache without any localising signs anywhere and with a pulse well under 100. Such symptoms need cause but little anxiety, and generally disappear after a purge. With a pulse of 120, however, the same symptoms are of the utmost gravity. In the present case, for example, the pulse rate was at first the only indication that the fever was of a serious nature, there were no rigors, the lochia were sweet and plentiful, the patient was bright and cheerful, the tongue was clean and moist, and the appetite good. On the other hand, the bowels were loaded, and that might have been accepted as an explanation of the fever and headache. And yet there was an acute septic process going on which was to terminate fatally on the eighth day. In this connexion it is interesting to note that during the twenty hours following the first dose of antitoxin the temperature fell from 103·2° to 98·6°, but as this was unaccompanied by any fall in the pulse-rate it was not regarded as a sign of improvement, but merely as a remission of temperature such as occurs naturally in septic cases; and this proved to be the case. Seeing the extreme importance of early treatment in puerperal sepsis, and the great value of the pulse-rate as a means of diagnosis in the early stages, I would lay down the following rule: if in the first three days of the puerperium the temperature rises without obvious cause to 102°, and is accompanied by a pulse-rate of 120 or more, the case should be regarded provisionally as septic, and if the temperature and pulse-rate are maintained for twelve hours and still no satisfactory cause is discovered the uterus should be curetted and douched without further delay. This was not done so early in the above patient's case because her condition was at first thought to be due to septic absorption from the vagina, and it was hoped that vaginal douching would be sufficient; there would, moreover, have been the risk of carrying septic matter from the vagina into the uterus on the douche tube. Dr. Champneys, in his lectures, and Professor Byers, of Belfast, in a paper read before the British Medical Association last July, emphasise the importance of the pulse-rate in these cases; but the point is, I venture to think, not sufficiently insisted on in textbooks. Pain in the back of such intensity as in this case is unusual, and nothing was found to account for it before or after death. The patient's tolerance of morphia was extraordinary; in one night she took three and a half grains hypodermically; the tolerance was genuine, for different samples of morphia were used. As so often happens in fatal septic cases, the condition known as euphoria was well marked; although she was being rapidly killed by acute sepsis the patient felt well, was in good spirits, and until the pain in the back began had no idea that she was seriously ill. Six hours before death she recognised her husband and talked rationally to him. No rash of any kind occurred.

I am indebted to Dr. Boxall, under whose care the patient was, for permission to publish the case.

Belsize-road, N.W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES ON A CASE OF MYXŒDEMA.

BY ERNEST A. DENT, M.B., C.M.EDIN.,
SENIOR RESIDENT OFFICER, DEVONSHIRE HOSPITAL, BUXTON.

A WOMAN, aged forty-five years, was admitted to the Devonshire Hospital, Buxton, on March 13th, 1895, suffering from pain and swelling of the joints, from which symptoms rheumatism had been diagnosed. On examining the patient I observed signs which led me to inquire for a history bearing on myxœdema, the chief of these being a dull expressionless face, some loss of hair, thickening, dryness, and scaliness of the skin, and the characteristic hesitating speech, manner, and gait. The patient complained of pain in the fingers, and pain and swelling in the feet, dryness of the skin, and absence of perspiration, also of increasing weakness and loss of memory, with want of interest in, and fitness for, any employment. She stated that these symptoms commenced about four years before and attributed them to a shock she received at that time. The family history was as follows. Three members—viz., her maternal grandmother and two of her sisters—were insane, and one brother of the patient was affected with rheumatism.

Treatment.—The patient was ordered thyroid gland tabloids (five grains) thrice daily, and, in addition, half a pint of the Buxton mineral water twice daily and mineral water baths up to the waist at a temperature of 100° F. for ten minutes every other day. After taking the tabloids for a few days she complained of giddiness, and there being some weakness of circulation a stimulant mixture was prescribed. When she had been in the hospital a little more than a fortnight she was very much better in every respect, a week later she said that she felt tired and her legs ached, and in about a fortnight after this she complained of feeling faint. The tabloids were now reduced to one daily. There was continuous general improvement in her condition almost from the commencement of treatment, and when she left the hospital, seven weeks after admission, her face had a much brighter expression, the thickening was much reduced, leaving her skin comparatively soft and wrinkled, she perspired freely, and her memory and manner were much better. She was recommended to continue taking one tabloid a day after her discharge.

As the patient has lately been re-admitted here I am able to give further particulars about her. She tells me that she went on taking one tabloid a day for about nine months after leaving (two years ago), and during that time she continued to improve. Since then she has not been so well, having "caught cold," and as she had another "trouble" she was very depressed and felt generally weak. About six weeks ago she had an attack of sickness and diarrhœa (attributed to eating oysters), and when recovering from this she sought admission here. Perspiration had ceased, she felt very weak, and was suffering from constipation and slight dizziness; the skin was very dry. She was ordered one tabloid twice daily and a stimulant mixture, and was, a fortnight later, very much better.

Remarks.—The family history, the patient's statement that the symptoms were caused by a shock, the rapid improvement under treatment, and the subsequent history, seem to me to be points of interest in this case. I think the favourable result obtained from the tabloids on her first visit here was aided by the warm baths, and the patient said that she felt much comfort and benefit from them. The later notes on this case tend to confirm the view, that in the case of myxœdema, although the symptoms have subsided, the thyroid treatment should not be entirely discontinued.

I am indebted to the honorary medical officer, under whose care this patient has been, for permission to publish the case.

Buxton.

A CASE OF LACERATION OF THE TONGUE.

BY ALFRED EVANS, M.R.C.S. ENG.

I WAS recently called to attend a boy who had been injured when playing cricket. It appeared that whilst

batting in a match he attempted to "pull a ball to leg," but the ball, instead of travelling to that vaguely-defined district, unfortunately landed on his own oral region. On examination the right side of his mouth was found to be very swollen and contused and there was considerable hæmorrhage. He was able to open his mouth with some difficulty, and it was then seen that the cricket-ball had fractured his right canine and lateral incisor teeth, breaking them off flush with the gum. The fragments of teeth had been driven with considerable force into the lingual muscles, the points of entry being near the frænum, the incisor fragment being forced out on the dorsum and easily extracted, leaving a punctured wound through the tongue, along which the probe easily passed from the sublingual to the dorsal surface. The canine tooth, however, had made a channel for itself extending from the attachment of the frænum into the muscular tissue, and could be felt embedded in the tongue near the middle line opposite the last molar tooth of the same side, and the probe was passed one inch and three-quarters before it reached the foreign body. Pressure and manipulation with the finger failed to remove it, so, having applied a spray of ethyl chloride along the track of the tooth it was grasped by dressing forceps and pulled out by the route by which it had entered. The tongue was considerably lacerated, but no artery of any importance was injured, and rinsing the mouth with iced water and, afterwards, frequent ablutions with a weak permanganate solution, together with abstention from all solid and hot foods, resulted in a rapid recovery, and, excepting a little soreness, the organ has now quite healed. The rarity of this form of accident is my excuse for reporting the casualty.

Acton, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

NORFOLK AND NORWICH HOSPITAL.

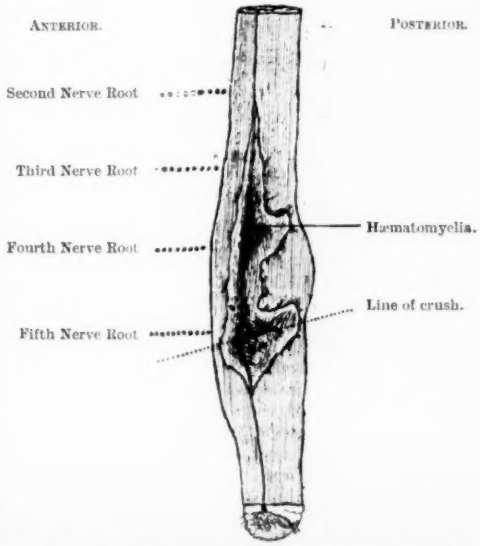
A CASE OF TRAUMATIC HÆMATOMYELIA; NECROPSY; REMARKS.

(Under the care of Mr. C. WILLIAMS.)

THE very definite symptoms to which a hæmatomyelia gives rise when uncomplicated by any other injury of the spinal cord enable a diagnosis to be made of the exact seat and character of the lesion. In the following case careful observation made the diagnosis certain and effectually prevented any idea of laminectomy, which could have been of no service. For the notes we are indebted to Mr. H. A. Ballance, house surgeon.

A woman, aged seventy years, was admitted into the Norfolk and Norwich Hospital at 9 A.M. on Feb. 3rd, 1897, having at 7.15 A.M. been found in an unconscious condition at the foot of a flight of nine stairs. On admission the patient was quite unconscious; the pulse was 64 and the respiration was 16. There was no stertor. The pupils were very contracted and equal, and showed no reaction to light. The knee-jerks were present. The breathing was solely diaphragmatic. There was a cut on the left side of the forehead about an inch vertically above the outer canthus and two-thirds of an inch long, exposing the pericranium. A fissured fracture could be felt at the bottom of this wound going obliquely downwards and inwards. There was, in addition, a scalp wound one and a half inches long at the back of the right parietal bone down to the pericranium, but the bone was not fractured. There was no irregularity about the cervical spine. Towards the evening of the day of admission the patient roused up a little, but not sufficiently to talk. There was no sickness, the right arm and leg were rather rigid, and the knee-jerk and plantar reflex were much better marked on that side. The left side of the body was quite flaccid. The breathing was rather noisy; the pulse was 56 and regular; and the rectal temperature, which on admission was 96° F., rose to 99·4°. On the 6th the patient remained in much the same condition and had roused sufficiently to say "No," "Yes," and "What," but she did not answer questions connectedly. The temperature varied from 100° to 101°, the respiration was 20, and the pulse ranged from 70 to 80. The pupils still remained pin-point in character. She lay on her back in a state of absolute flaccidity, all four limbs being motionless and the arms lying by the sides. Costal respiration was quite absent. There were no reflexes in the lower limbs. There was entire loss of sensation from just below the level of the clavicles downwards, but the exact limiting line could not be defined owing to the patient's dull mental condition. It was evident, however, that the skin area supplied by the fifth cervical root was quite devoid of sensation and that the anæsthesia extended from this region downwards. The catheter had to be used, as there was retention of urine and the bowels did not act unless purgatives or enemata were given. The urine contained neither albumin nor sugar. On the 8th the general condition and the state of the temperature, pulse, and respiration remained the same. The plantar reflexes had re-appeared, the right being better marked than the left. In the evening of the 9th she was not so well. The temperature had been rising all day, so that at 8 P.M. it was 105° in the rectum; the pulse was 92, and the respiration was 40 and shallow. She was more comatose and could not be roused at all. There was complete flaccidity. No reflexes, tendon or plantar, could be elicited. The patient died at 6.30 A.M. on the 11th, having gradually sunk since the 9th. The temperature had continued rising, so that two hours before death it was 108° in the rectum, and ten minutes after death, 109.2°. The pulse reached 100 for the first time on Feb. 10th.

Necropsy.—A post-mortem examination was made at 4 30 P.M. on the day of the patient's death. The fracture of the skull in connexion with the wound on the left side of the forehead was found to be two inches long, and it passed obliquely down through the anterior part of the temporal fossa into the anterior fossa of the skull base. There was no depression of bone, laceration of the brain or hæmorrhage on its surface. There was a good deal of cerebro-spinal fluid in the ventricles, and the cut cerebral surface appeared to be more moist than usual. On exposing the cervical spine from behind, the column appeared to be normal and even after removal of the laminæ and division of the theca the spinal cord looked perfectly healthy, and there was an entire absence of meningeal hæmorrhage. On passing the finger down the cord, however, a portion opposite the upper border of the fifth cervical vertebra felt quite soft, as if pulped. The cord having been removed and divided vertically in the sagittal plane, a hæmatomyelia involving its central parts, was seen to be present opposite the bodies of the third, fourth, and fifth vertebræ inclusive, and of the form shown in the illustration.



Longitudinal sagittal section of the cervical spinal cord, showing the hæmatomyelic cavity in the centre and the levels of the cervical nerve roots.

This cavity was filled with broken-down blood-clot, the spinal cord being softened around it. It measured one and three-quarter inches vertically and tailed off above and below along the central canal. The largest part of the cavity was opposite the upper border of the fifth cervical vertebra and the fifth nerve root. The upper tailed extremity reached to the level of the second nerve root. Posteriorly the layer of nervous matter bounding the cavity measured one-twentieth of an inch in thickness and anteriorly one-eighth of an inch. The disorganisation encroached more into the right than the left lateral region of the cord. The level of the crush was oblique, as shown in the figure, and exactly opposite the fifth nerve root. On examination of the spine the posterior common ligament was seen to be intact, but the anterior was ruptured opposite the body of the fifth vertebra, which was horizontally fractured at quite its upper part, only a scale of bone having been detached and remaining adherent to the disc between the fourth and fifth bodies. There was no fracture of the articular processes. The lungs were well aerated all through and showed no excess of fluid in the tubes; this was singular considering that the breathing had been solely diaphragmatic for eight days. The other organs were healthy.

Remarks by Mr. BALLANCE.—The case is interesting both from the comparative rarity of hæmatomyelia and from the typical symptoms of injury of the cervical cord that were present. The level of the injury was easily diagnosed during life. It was evident that the fifth cervical root had not escaped because of the cutaneous anæsthesia and the paralysis of the deltoid group of muscles, and that the fourth was intact because of the persistence of diaphragmatic breathing. From the absence of the irritative symptoms commonly met with in hæmorrhage into the meninges it was concluded that the damage was probably limited to the cord itself. The contraction of the pupil and the slow pulse, due, as is well known, to the paralysis of the pupil dilator and cardio-accelerator fibres respectively in their course down the spinal cord to the upper dorsal region, were very noticeable. The exact nature of the injury was dislocation with recoil, the upper four cervical vertebræ with a part of the fifth having passed forwards on those below them and then sprung back again into their former position, bruising the cord during the process. The situation of the injury in the present case entirely accords with Thorburn's experience. He states[1] that traumatic hæmatomyelia usually occurs opposite the fourth, fifth, and sixth cervical vertebræ, and that he has not met with a single case in the dorsal or lumbar regions, a circumstance which he adduces to prove that this form of injury is due to dislocation with recoil, and not to what is vaguely called concussion. Necropsies are very uncommon in this form of hæmatomyelia, as the majority of cases recover. It is to be regretted that this patient also sustained a head injury, as otherwise a much more detailed clinical picture might have been obtained.

Reviews and Notices of Books.

The Physiology and Pathology of the Cerebral Circulation: an Experimental Research. By LEONARD HILL, M.B.Lond., Hunterian Professor, Royal College of Surgeons of England. London: J. and A. Churchill. 1896. Price 12*s*.

THE profound and exhaustive researches upon the cerebral circulation which Dr. Leonard Hill expounded in his Hunterian Lectures for 1896 did much to throw light upon a question that is amongst the most difficult for the physiologist to determine. The re-publication of these lectures in the form here presented will therefore be heartily welcomed, for in them the reader is led step by step towards the explanation of the phenomena of the pathological states of anæmia and compression. The conditions under which the circulation is carried on within the closed cavity of the cranium are not to be explained on anatomical grounds or even deduced from clinical observation. They can only be investigated by experiment, and it is because the experiments carried out for this purpose by the author of this work were so skilfully planned and so well adapted to discover the actual conditions that they have been so fruitful. For there is no question that these physiological researches have led to a very material change in the point of view from which the phenomena of cerebral anæmia and compression must be regarded. Commencing with the study of the movements of the brain, cardiac and respiratory, Dr. Hill passes to consider the *rôle* of the cerebro-spinal fluid, establishing the important fact that in normal states the tension of this fluid is equal to that of the venous pressure. He shows that the subdural space is physiologically one with the sub-arachnoid, and that fluid can pass readily from one to the other—a fact which, though anatomically disputed, yet is confirmed by the teachings of pathology. It is instructive to learn that withdrawal of this fluid is at once followed by serous transudation from the blood, and that it is impossible for any increase of the cerebral tension to be transmitted by the cerebro-spinal fluid owing to the tendency to equilibrium between the intra-venous and subarachnoid pressure. Dr. Hill also shows that it is possible to irrigate the brain and spinal cord with ease, his final conclusion to this section being the suggestion "that in such a pathological condition as meningitis irrigation of the meninges might be employed." He adds: "The operation could be as easily and safely carried out as that of irrigation of the peritoneum." The next section deals with the cerebral circulation. Whilst confirming the general truth of the Monro-Kellie doctrine that the volume of blood in the brain is almost invariably constant, Dr. Hill, by means of most carefully devised experiments, has studied the relations of the intra-cranial circulation to that of the general circulation. In some respects his results run counter to those of other experimenters, but he gives good reasons for such divergencies, and affords much matter for thought and inference. One interesting outcome of this research is the evidence that the circulation within the skull is uncontrolled by vaso-motor nerves, but that it is influenced solely by the variations in the general arterial or venous pressure. In so far as this is under any nervous control, it is through the splanchnic nerves that the cerebral circulation is to be modified, the circulation being accelerated by a rise in arterial pressure and slackened by a fall in that pressure. Owing to the conditions within the skull it is not possible for the intracranial pressure to be more than momentarily raised above that of the cerebral venous pressure. "The cerebral circulation passively follows every change in the general circulation. Every change in the position of an animal from the influence of gravity on the vascular system affects the cerebral circulation. Every variation in respiration and every muscular movement is followed by passive changes in the circulation of the brain. Every heart-beat and every respiratory undulation is exhibited on the tracings of the cerebral venous or intracranial pressures. Compression of the jugulars or the abdomen causes a marked rise in cerebral venous pressure, and muscular movements of the neck by pressure on the jugular veins are sufficient to affect the cerebral circulation. Every stimulus that enters the organism and affects the general vaso-motor centre produces a passive effect on the cerebral circulation. Each pleasurable emotion raises the general blood pressure and increases the blood-flow through the brain, and each painful emotion brings about the opposite result. It is by means of the splanchnic area that the blood-supply to the brain is controlled" (p. 74). This passage illustrates the prime fact learnt by this research—namely, the close dependence of the circulation within the skull upon the conditions obtaining in the body generally, and at the same time affords physiological reason for facts of daily experience. A section is devoted to the discussion of the influence of the force of gravity on the

[1] Surgery of the Spinal Cord. By William Thorburn. 1889.

circulation, and opens up many questions of practical moment. The main lesson to be learnt is that the effect of gravity is compensated for by the splanchnic vaso-motor system, and that the extent of this varies in individuals. The phenomena of syncope and shock are explained, and the value of abdominal compression in restoring the subjects of these conditions, or those of cardio-vascular paralysis from chloroform poisoning, is well exemplified. The application of these physiological studies to the subjects of cerebral anæmia and cerebral compression forms two most valuable and interesting sections of the work. The conditions for the production of cerebral anæmia are explained in detail and the effects of narcotics as well as the phenomenon of sleep are discussed, the great share taken by the splanchnic vaso-motor apparatus being again dwelt on. As regards compression it is shown that the brain does not transmit pressure equally in all directions, and that there is "complete pressure discontinuity between the cranial and vertebral cavities" owing to the viscosity of the brain substance, the tentorium cerebelli, and falciform ligaments, and to the plugging of the isthmus tentorii cerebelli and the foramen magnum by the translocation of the brain mass. The symptoms of compression are mainly those of anæmia of the bulb, and are due to the cessation of the blood flow. A small opening into the skull does not necessarily relieve compression, for what is required is to allow of "an equivalent compensatory expansion of the cranial contents," which may not take place owing to the viscosity of the brain mass. These are some of the inferences drawn by the author, but we fear that it is not possible to do him full justice without extensive citation. We would, however, strongly commend his admirable monograph—which is a model of clear exposition and sound reasoning—to the attention of physiologists and pathologists. They will find in its pages much material for consideration, and many an obscure point in cerebral pathology and in the symptomatology of cerebro-spinal disease will be made more clear. Nor can these studies fail to produce good fruit in regard to the more rational and hopeful treatment of disturbed conditions of the cerebral circulation.

LIBRARY TABLE.

Oban: a Health and Holiday Resort. By EDWIN BAILY, M.B., C.M. Edin., Medical Officer of Health of the Burgh. Oban: Hugh McDonald. Pp. 48.—Increased facilities of access, both by railway and steamboat, as well as the natural advantages of its situation, have rendered Oban one of the most popular summer resorts in the Western Highlands of Scotland. It can be easily reached even from London, the route being by Stirling and Callander, and the duration of the journey from thirteen to fifteen hours. Dr. Baily has written a charming description, not only of the town with its immediate surroundings, but also of many picturesquely situated places of interest in the neighbourhood. The frontispiece is a view of Oban Bay crowded with yachts, as it often is in summer time, and numerous other landscapes are scattered throughout the pages. In conclusion, he recommends either the earlier months of the year or October as the best seasons for health-seekers and those whose time is at their own disposal to visit Oban; and he brings forward some strong evidence of its advantages even as a winter resort, on the ground mainly of the mildness and equability of the temperature and the profusion of plant life during winter. An average of ten years gave the mean daily temperature of January at Oban as 39·8° F. and of August as 57·3°, whilst at Torquay, in the south of England, the means for the same months were respectively 39·4° and 59·9°.

Fruits and Farinacea the Proper Food of Man. By JOHN SMITH. London: The Ideal Publishing Union. 1897. Pp. 172.—This is a new edition of a tolerably well-known vegetarian work, which was first published many years ago, and is, in the words of the sub-title, "an attempt to prove, from history, anatomy, physiology, and chemistry, that the original, natural, and best diet of man is derived from the vegetable kingdom." The author, evidently possessing considerable literary ability and not carried away by prejudice, availed himself freely of extracts from medical books which could be used in support of his case, but his reasoning almost necessarily falls short of being conclusive, firstly, because the original food of man is of no practical consequence at the present day; secondly, because the human alimentary tract does not correspond to that of either the herbivora or the carnivora among the lower animals; and, thirdly, because the most important vegetable food products are derived from cereals, all of which are unfit for use in the "natural" state, and require processes of preparation quite as complicated as those necessary for animal food. The best chapter in the book is probably the one headed "Vegetable Food Consistent with Physical Strength and Activity." In questions of this kind practical experience is more useful than theorising, and there is plenty of evidence that many persons find vegetarian dishes, when properly cooked, to be both wholesome and palatable.

A Handbook of Surface Anatomy and Landmarks. By BERTRAM C. A. WINDLE, D.Sc., M.D. Dub., Professor of Anatomy in Mason College, Birmingham. Second edition, revised and enlarged, in collaboration with T. MANNERS-SMITH, M.A., M.R.C.S., Lecturer on Osteology and Senior Demonstrator of Anatomy, Mason College, Birmingham. London: H. K. Lewis. 1896. Pp. 143. Price 3*s.* 6*d.*—We are told in the preface that this little book is not intended to be a treatise on surgical applied anatomy, but is meant for students of anatomy in their first and second years, to serve as a guide for that portion of the knowledge of the human body which can be gained without dissection. Directions are also given for the examination of certain of the orifices, and for the use of some of the common surgical instruments, such as the catheter. That the book has reached a second edition is proof that it has been found to be of value, but we should certainly be inclined to recommend it rather to students after they had entered the wards of a hospital than before passing in anatomy and physiology. It is, of course, desirable that while a student is studying anatomy he should have some idea of the various applications of this anatomical knowledge in the practice of medicine and surgery; and, indeed, most works on practical anatomy, such as "Ellis's Dissections" or "Cunningham's Anatomy," contain chapters devoted to superficial anatomy and to other anatomical facts which are found by the student to be important later in his career. But this introduction of medical and surgical applications of anatomy into the ordinary text-books intended for the use of students of the first and second year can easily be overdone; and in this volume we continually meet with words and phrases which must be almost incomprehensible to the student who has not yet entered on the study of surgery. The book is carefully written, perfectly trustworthy, and it is well illustrated by a large number of diagrams. We may especially commend the chapter devoted to a description of the relations of the scalp and skull to the fissures and convolutions of the brain; this section has been largely re-written for this edition. We consider that the book forms an excellent guide to the superficial anatomy of the body, and that, though it may assist junior students, it will be especially useful to candidates for the final examinations.

Analytical Records
FROM
THE LANCET LABORATORY.

XEROFORM.

(BURGOYNE, BURBIDGES, AND CO., 12 AND 16, COLEMAN-STREET, E.C.)

"XEROFORM" is a yellow powder, not unlike iodoform in appearance, and possessing a similar but less pronounced smell. It is a compound of tri-bromo-phenol with oxide of bismuth, the two being together in nearly equal proportion. It is insoluble, practically tasteless, and non-irritating, and appears to act as an excellent antiseptic. Bacteriological experiments have shown that it possesses a very powerful germicidal effect upon the comma bacillus and other pathogenic organisms. Xeroform is stated to have been used in gynæcological practice with gratifying results and also in affections of the skin. It is described as "the iodoform of the future."

RONUK.

(RONUK, LIMITED, 83, UPPER THAMES-STREET, E.C.)

This is a brown mahogany-coloured paste described as a sanitary polish and cleanser suitable for renovating the surfaces of the floors of a sick chamber or of hospital wards. It possesses a pleasant aromatic smell, and readily produces an attractive polish on leather or flooring with a minimum of work.

(1) ICHTHYOL; (2) DUODENIN; AND (3) HYPNOTIC CO. PALATINOIDS.

(OPPENHEIMER, SON, AND CO., 14, WORSHIP-STREET, E.C.)

The convenience of administering insoluble and nauseous drugs in the form of palatinoids is again illustrated in some recent new additions to the list. These comprise palatinoids of ichthyol, containing 3 grains of the sulph.-ichthyolate of ammonium; of duodenin, containing 5 grains of the purified enzyme of the duodenal ducts; and a hypnotic combination of potassium bromide 4 grains, morphia $\frac{1}{12}$ grain, cannabis indica extract $\frac{1}{2}$ grain, and pulv. fol. hyoscyami 1 grain. The last is an approved formula, while the previous substances are of well-known value.

NEW FORMULÆ (PARKE DAVIS & CO.).

(PARKE, DAVIS AND CO., DETROIT; LONDON AGENCY, 21, NORTH AUDLEY-STREET, GROSVENOR-SQUARE, W.)

Perhaps the most interesting preparation recently sent to us by this firm is the Plasma Nasal Tablet. It is designed so that when dissolved in two ounces of water a solution of the same density as blood serum is obtained. The calculated effect of this is to prevent diffusion of the solution through the mucous membrane, leading probably to engorgement and irritation. The tablets are composed of sodium chloride, sulphate, and phosphate, with definite quantities of the same potassium salts; to these is added a small quantity of menthol. The resulting solution when a single tablet is dissolved in two ounces of warm water would appear to be well adapted for washing out the nasal cavities. Taka diastase is now well known as a powerful amylolytic ferment obtained by cultivation upon a species of fungus. It is now combined with pepsin and pancreatin, thus making the preparation of decided and general value in certain forms of digestive failure.

NEW TOILET PREPARATIONS.

(BLONDEAU ET CIE, MALDEN-CRESCENT, N.W.).

The preparations submitted to us were as follows:—Violette de Parme Soap, Bouquet Soap, Lait Vinolia, Triple Extrait, and Brown Vinolia Cosmetic. Each and all showed a standard of purity consistent with purposes for which they are intended. The soaps contained an excellent basis absolutely free from any excess of alkali. Lait Vinolia appears to be a fatty emulsion not unlike milk in appearance. Ether extracted an oil along with which was associated the delightfully fragrant essential oil of the rose. The Triple Extrait consisted evidently of a solution of otto of roses in spirit. We could trace no objectionable ingredients in any of the preparations described.

EXTRA OAT STOUT.

(MICHELL, GOODMAN, YOUNG, AND CO., STAMFORD-HILL, N.)

An important departure in the preparation of this fermented liquor is the employment of a definite quantity of oat. As a consequence the extractive matters are found to contain a higher proportion of nutritive material than would be the case if barley malt were alone employed. An increase occurs chiefly in the amount of nitrogenous principles, and of the valuable mineral constituent, phosphate of potassium. The resulting liquor is of a mild but somewhat full flavour and in ripe condition. Our analysis was as follows: extractives, 6·30 per cent.; mineral matter, 0·45 per cent; alcohol, by weight 5·0 per cent., by volume 6·24 per cent., equal to proof spirit 10·94 per cent.; total acidity reckoned as acetic acid, 0·90 per cent. It is clear from these results that the preparation is one of merit and a nourishing article.

NURSERY BISCUITS.

(A. ROBB AND CO., 79, ST. MARTIN'S-LANE, W.C.)

These biscuits are evidently prepared with a due consideration of the special requirements of infants and invalids in the choice of an easily digestible farinaceous food. The biscuits are delicately crisp and well cooked. They are somewhat sweet and malty to the taste, containing an excellent proportion of soluble carbo-hydrate, notably dextrine, which, as is well known, is a valuable element of food for children and of easy assimilation.

LIGHT BITTER ALE.

(THE BECK BREWING CO., PRESCOT-STREET, LIVERPOOL.)

The analysis of this product was as follows: Total extractives, 2·35 per cent.; mineral matter, 0·11 per cent.; absolute alcohol, by weight 0·05 per cent., by volume 0·07 per cent., equal to proof spirit 0·12 per cent.; total acidity reckoned as acetic acid, 0·25 per cent. It contained no preservatives. The ale is evidently a genuine infusion of hops and malt liquor, but with only a trace of alcohol. It is brilliant and sparkling, with good flavour, simulating the ordinary brewed and fermented article.

MEADOW SWEET CHEESE.

(THE MEADOW SWEET CHEESE CO., 5, RAINFORD-SQUARE, LIVERPOOL.)

Our analysis of this excellent dairy product was as follows; Water, 33·43 per cent.; fat, 30·41 per cent.; casein, 32·12 per cent.; mineral matter, 4·04 per cent., containing 1·20 parts salt. These results are very satisfactory, and fully bear out the statement that this cheese is "carefully made from the milk of selected dairies and enriched with cream." The sample we examined was contained in a jar upon which was marked the date at which the cheese was made and packed. Since, as we found, there are no objectionable preservatives used in its manufacture, while it contains, as will be seen, only a minimum of common salt, it does not keep for more than a week or ten days. The proportion of fat is a noteworthy feature in the analysis; and, moreover, on determining its melting point we found it to be 31° C., which is exactly that of genuine milk or butter fat. The sample which we examined possessed an excellent flavour, free from roughness, bitterness, or acidity. It is evidently cheese, and nothing but cheese, and that of first-class quality. This, we fear, is more than can be said of much of the stuff that is sold as cheese in the English market at the present time.

THE LANCET.

LONDON: SATURDAY, AUGUST 7, 1897.

THE members of the British Medical Association who hunger and thirst after medical science will this year have to repair to Canada for their satisfaction. Those who rather affect questions of a medico-political sort or such as bear on the constitution and duties of the Association have already had their meeting. It really seems as if the members of the Association were divisible into two such sects as the above. There are, of course, a few striking exceptions—men equally at home in the discussion of either set of subjects; but, as a rule, there is a sharp line of demarcation, and certain names appear in the one section which are conspicuously absent in the other, and *vice versâ*. Nor is the blame one-sided. It is easy to say that the great questions affecting deeply the interests of the profession, its constitution, its privileges, and its duties, are discussed year after year by the same limited group of speakers, who might be counted on the fingers. The fact, however, is not the fault of the members in question. The general meeting of the Association is open to all members, and all should take a decided part in its affairs and their administration and in its constitution. Even as an instrument for the promotion of medical science the Association will suffer if the great majority of its members take no part or lot in the discussion of its duties; and as an instrument for affecting public and Parliamentary opinion it will suffer great impairment if the leaders of the profession do not do their share in giving a tone of moderation and breadth to questions which cannot be settled without reference to public and Parliamentary support.

The business meetings of the Association, if we may judge from the numbers who vote, are attended by a mere fraction of the members. At the meetings held last week the questions discussed were of great importance, such as the functions of the Council, the constitution of the Association, the deference due respectively to a general meeting of members and to the views of the branches carefully ascertained, the Midwives Bill, or, to speak more accurately, the Obstetric Nurses Bill, indirectly the question whether the Association should undertake the work of Medical Defence, the case of Mr. R. B. ANDERSON, and the disciplinary function of the Association in the way of excommunication. It will not be denied that these questions involve the very judgment and reputation of the Association—even of the profession—and that errors of judgment in regard to them may not only involve the Association in discredit, but may be disastrous to the profession, yet they were determined by 150 or 160 members; and it occasionally happens in the Association that the gravest questions are settled by half that number. It cannot be wondered at that the Council are fain to refer such subjects to the branches for careful consideration and advice, and that the judgment of the branches is not always the same as that of a general meeting, which is often controlled by a handful of speakers who are apt to regard themselves as the Association. It would be personal to specify illustrations, but members of the Association will have no difficulty in supplying them. It is the more unnecessary as we seem to detect in the proceedings of the recent annual general meeting, with one or two exceptions, a greater spirit of responsibility and moderation than has often of late years been exhibited, and a greater disposition in different sections to believe that there is something in other views than their own.

Two very different incidents in the proceedings deserve a word of notice. The presentation of the gold medals will be generally approved. If an association does not emphasise such services as those of Mr. WHEELHOUSE and Sir WALTER FOSTER there must be something wrong in it. The award of the Stewart Prize to Dr. G. SIMS WOODHEAD and of the Middlemore Prize to Dr. ALEXANDER HILL GRIFFITH will be equally approved. The other incident was of a painful character—the expulsion of two practitioners from the membership of the Association for having accepted offices under the Government of South Australia in the General Hospital of Adelaide, vacated by the whole staff as a protest against the conduct of the Government. The members so removed had ample opportunities of defending themselves. We cannot wonder at the all but unanimity with which the Association acted in this matter. The profession must protect itself, and it would be simply lamentable if a great voluntary association were to be stricken with the same paralysis of discipline which seems to threaten the chartered and statutory authorities.

IN the Bradford district—the home of the wool-sorters' disease—another case of death from anthrax recently occurred, in time, it is to be hoped, to check the withdrawal of certain restrictions which, from time to time, have been placed on the sorting of wool. But whatever means be adopted in the sorting-room, there must necessarily, from the nature of the dust in which the anthrax spores are carried, be very great danger, at some point or other of the process, to those engaged in wool-sorting or, as Dr. BELL, of Bradford, points out, in the removal of the dust from the vessel in which it accumulates. It appears that the time for the general consideration of the carriage of infective material in hides, hair, and rags has arrived; and although the destruction of none of the pathogenic organisms with which we are at present acquainted presents quite the same difficulties as are associated with the destruction of anthrax spores, there can be little doubt that the question of sterilisation in bulk is one that will have to be faced sooner or later.

As has been pointed out by the Dangerous Trades Committee of the Home Office, there are certain districts—notably Asiatic Turkey, Persia, Cashmere, South Africa, and Peru—from which fleeces from animals that have died from anthrax—fallen fleeces—are constantly being sent, whilst hides from some of these places and from China, and hair from Russia and Siberia, are often taken from

cattle and horses that have succumbed to anthrax. It is, of course, evident that the ideal method of treating such material would be by sterilisation before the goods are baled; but that being out of the question, it is all-important that some plan of sterilising in bulk, if possible, or in loosened bulk, if necessary, should be devised. In the case of hair, through which steam and liquids percolate most readily, the difficulty should not be very great, but in the case of pressed wool and baled hides the obstacles to thorough disinfection are necessarily very much greater. A dense mass of wool exposed to superheated steam, even for a very considerable period, could be affected on the surface only, whilst such treatment of leather would ruin it for all commercial purposes. We cannot think, however, that a committee, composed of practical men accustomed to deal with these various goods, of one or two thoroughly capable medical officers of health, and of a similar number of expert bacteriologists, would be unable to draw up a satisfactory report on the various means of dealing with goods coming from scheduled districts. Any one of these sets of men alone would be utterly incapable of dealing with the subject; but the whole of them, looking at the question from various points of view and with the benefit of each other's advice, should be able to draw up a workable scheme which would approve itself to all concerned. If the question could be settled as regards anthrax it would be settled for every other disease from which we have anything to fear from the carriage of infection through the agency of imported goods. In a letter published in our columns last week it is pointed out that if certain observations as to the persistence of vitality of the rinderpest virus be correct, it is essential that the hides from "dangerous" districts should be submitted to a process of disinfection before they are admitted to this country. Any measures that would be sufficient for the sterilisation of the anthrax hides would be, of course, more than sufficient for the sterilisation of rinderpest hides; but at present there are no methods known by which even baled rinderpest hides could be rendered free from the virus if it were present.

As regards the possibility of the carriage of the infection of plague to this country, considerable light has been thrown on the question by the various recent workers at the life-history of the plague bacillus. All are agreed that, except under very favourable conditions, the plague bacillus very rapidly dies out, whilst even under the most favourable conditions it is difficult, without constant re-inoculation and passage through living animals or human beings, for the organism to maintain a high degree of virulence. It follows therefore that wherever a long voyage has to be made, even in these days of rapid transit, the bacillus as a rule dies a natural death, and although the organism may be present and alive in goods that leave Bombay, it has lost its virulence, and usually also all vitality, by the time that it reaches—this country, say. Quite recently Dr. KOCH and the Bombay Commission have fully confirmed these statements as to the short life of the plague bacillus. Still, it is obvious that under certain conditions it might be necessary to disinfect rags and flock from plague-stricken districts; but in most cases this could be done with comparative ease, owing to the nature of the fabrics in which the infective material might possibly be lodged. This whole question is one of very great importance. It has even been suggested by the Dangerous Trades Committee that "Government should be empowered to stop the landing of hides on receipt of information that they come from infected areas." They also suggest that horsehair and bristles from Russian and Siberian animals should be excluded from our ports on the same grounds that infected animals are not allowed to be sent into the country. As we have already pointed out, no evidence can be collected that there is any danger of the conveyance of the plague to the United Kingdom through the wool that arrives from ports where plague is prevalent, and in this case the experience of those engaged in following the history of outbreaks of disease is entirely at one with the most recent scientific evidence. In the same way we have as yet no evidence that the rinderpest virus can be carried and remain active for any length of time in baled goods; even the laboratory experiments concerning the vitality and virulence of rinderpest virus do not afford grounds for definitely supporting this opinion, and anything that has been advanced has been in the form of suggestion rather than of actual statement. In the case of anthrax, however, we are dealing with a very different state of affairs. Owing to the conditions under which the anthrax organism finds its way into the wool and hair of animals that have died from anthrax, spores are almost invariably formed before the organism dies. These spores are extremely resistant to drying and, in fact, to all agents and agencies which might prove fatal to less resistant organisms. Their powers remain dormant apparently for years, and only come into play—but then with all their original intensity and virulence—when the conditions of moisture and nutrition are again sufficiently favourable for the development of the potential energy of the spore. This very fact renders it exceedingly difficult to sterilise any substances into which these organisms have found their way; but there can be no doubt that it is our duty to find some means by which these organisms may be rendered harmless before the fleeces or the skins come into the hands of the wool-sorters and the leather-dressers.

WE shall continue next week our Commissioner's report on hospital abuse at Birmingham, and take this opportunity of thanking our many supporters who have borne witness in public and private to the value that this branch of our work has in their eyes, and of assuring them that our policy in the past with regard to this important question will be our policy in the future. We shall continue in these articles to report facts obtained from trustworthy sources, or founded upon the personal investigation of our Commissioner, and we shall attempt to draw a moral from these facts that, haply, order may spring out of chaos, and a problem, or a series of problems, which now defies the remedial measures of all experts in charitable matters, may become simpler of solution in the light of more accurate special knowledge. Remedies academic or comprehensive will probably suggest themselves by comparison of the different troubles in different localities—but the first thing is to get the facts.

In this connexion we have pleasure in calling attention to Dr. ROBERT SAUNDBY'S letter upon our Commissioner's first article dealing with hospital abuse in Birmingham, which appeared in THE LANCET of July 31st. Dr. SAUNDBY'S letter will be found upon page 331 of our present issue. Dr. SAUNDBY'S name is probably known to many of our readers as President of the Council of the British Medical Association, and he is described in the Medical Directory of 1897 as Physician to the Birmingham General Hospital, Consulting Physician to the Birmingham Eye Hospital, Consulting Physician to the Birmingham and Midland Hospital for Women, and Examiner in Medicine to the English Conjoint Board — among other titles to respect. So that from more than one point of view we might have anticipated thoughtful criticism of our work from him. We might have credited him, as a pluralist in hospital appointments, with being aware that the efficiency of the hospital work of the kingdom has been much crippled by the distribution of indiscriminate charity, especially in the out-patient departments. We might, again, have felt secure that we should find him, as a high officer in the British Medical Association, quick to comprehend all sides of a topic the settlement of the inherent difficulties of which is a matter of such urgent importance to the general practitioner. In each capacity—whether as one of the chief officials of the British Medical Association or as a physician prominent in public charitable work—we might have fairly concluded that we should obtain from Dr. SAUNDBY a judgment of our work inspired by fairness as well as by special knowledge. Moreover, we might have expected from a gentleman who has held such responsible posts in the profession and who is a physician of experience and culture the usual courtesies of debate. Instead of which we receive the little letter to which we have already referred. In this letter we read of our Commissioner as a "self-sufficient gentleman," while lower down the eye catches the polite phrases, "spiteful misrepresentation," "cowardly and cruel libel," "suffering from the effects of the dog-days," "monstrous accusation," "interference of outsiders"—to cull a few blossoms, surely already a little faded, from Dr. SAUNDBY'S epistolary rhetoric. Not one word of justification does Dr. SAUNDBY condescend to employ. Our Commissioner has written, as he will continue to write, in full detail of the situation in Birmingham. On no point or points whatever does Dr. SAUNDBY controvert his statements. In not one single instance does he exhibit and gibbet the cowardice, cruelty, and misrepresentation of which he writes. He prefers to be vague and abusive, for we can use no other word to cover the phraseology we have quoted.

And here we might fairly leave the matter, for Dr. SAUNDBY has shown himself to be so unable to form an unbiased judgment of our aims that we might hold his estimate of our work valueless. We might respond that he was at liberty to think what he liked and say what he liked, but that we should be unable to afford him the gratification of taking him seriously. But we consider it important to dwell upon one point in Dr. SAUNDBY'S letter. We are bound to reflect that the myopia which Dr. SAUNDBY has exhibited, although in the enjoyment of unexceptional opportunities for insight into the difficulties that surround the question of hospital abuse, may be shared by others of our readers less fortunately placed. Therefore, we invite all readers of THE LANCET to peruse Dr. SAUNDBY'S letter and to note in it the untenable position of privacy from discussion that is there assumed for affairs that are clearly of public interest. Dr. SAUNDBY talks of "interference of outsiders," and reports certain of the profession at Birmingham as having told our Commissioner "to mind his own business." Our Commissioner, who gives us a truer view than Dr. SAUNDBY of the kindness and good sense of the practitioners in Birmingham, was minding his business —i.e., THE LANCET'S business—when he made his inquiries into a matter of the first interest to the medical profession. It is imperative that all should understand that the hospitals do not belong to the medical staff. It is imperative that the medical profession should realise that public charities must be administered for the public good, and that public deeds are open to public criticism. At the present moment the suffering poor, the charitable public, and the general practitioners alike suffer from the lax methods of the distribution of hospital benefits. As good men, as just citizens, and as kindly fellow practitioners, all medical men should do their utmost to help in arriving at better methods, if better methods can be devised. As medical journalists we have our share in this work, and we shall continue to discharge our duty as seems proper to ourselves, secure in our knowledge that what we have done has borne good fruit, and deeply conscious that had not it been for the hearty coöperation of the medical profession in so many localities the information which we have already been able to diffuse could not have been obtained.

Annotations.

"Ne quid nimis."

A PLEA FOR A STATE MEDICAL SERVICE.

IN a recently published pamphlet Dr. James Erskine, lecturer on Aural Surgery in Anderson's College Medical School, Glasgow, advocates a complete departure from the system of medical practice as at present constituted. The multiplication of hospitals, the gratuitous treatment of infectious disease at the public expense, the growth of the provident society organisations, and even the recent improvements in the practical parts of medicine and surgery, whereby methods have been introduced more and more difficult to apply in private dwelling-houses with the assistance of an amateur nurse, have all of them had the effect of seriously encroaching on the field of the time-honoured family medical man. Dr. Erskine puts the case accurately in describing this unsatisfactory condition of things as "an undeserved Nemesis overtaking the medical profession for their beneficent labour," and he does not hold out any prospect of an improvement under present conditions. His remedy is a nationalisation scheme, most of the details of which he leaves to be supplied by others, his main recommendation being that "hospitals ought to be uniformly free and accessible both as regards illness and locality." For some years the hospital question has, he says, been discussed mainly from the point of view of so-called abuse by patients in a position to

pay fees, and for various reasons he thinks that any agitation for reform on that ground is destined to fail, for the complaints being prompted by financial and professional considerations do not excite popular sympathy, and have not elicited any favourable response from the medical staffs or the governors of hospitals. In a State-organised medical service, however, this divergence of interests would not exist. "The hospital, as we have it at present, should be the great central institution of health ..... Medical laboratories would be provided at hospitals convenient for pathological work, and for original research and scientific investigation, in which men could work under certain regulations and with defined terms of encouragement and reward. Appointments would be made mainly by examination, repeated at intervals of years, and promoted by length and merit of service. Men in the national service would not be entitled to undertake any private practice for remuneration. If after serving the State a certain term they desired to practise among the wealthy or the class of the community declining to avail themselves of the national medical provision, they would be free to do so after relinquishing national appointments." ..... "A system of national hospitals must necessarily include medical schools." Such are the essential features of Dr. Erskine's scheme. The first observation which occurs to us with regard to it is that it would be practically an extension of the existing system of Poor-law medical relief with the hospital out-patient department superadded, and that it would have a disastrous effect on the development of medical science, for the incentives to individual effort would no longer exist and medical education would tend to become a mere perfunctory routine. Fashionable practitioners, unhampered by official trammels, would no doubt thrive as they have always done, but the appointments at the great hospitals would cease to be regarded as stepping-stones to fame and fortune, mediocrities would gravitate towards them, the spirit of progress would languish, and the best interests of the profession would suffer not a little by the change.

THE POONA OUTRAGES.

THE vindication of the authorities at Bombay and of the British soldiers employed on plague duty from the foul and scandalous charges brought against them is as complete as we, in common with most people, felt it would be. On all sides it is now admitted that these charges were false and unfounded. Professor Gokhale has been compelled to withdraw his statements and apologise for having made them. Sir William Wedderburn has taken the only course open to him and has expressed to the House of Commons his extreme regret for having directly or indirectly aided in giving currency to charges that cannot be substantiated; and a large and influential meeting of Mahommedans at Poona has freely admitted that there was no cause whatever for complaining of the proceedings of the plague committee, which had been carried out with the least possible inconvenience to religious feeling. We have now learned, too, the details connected with the murders of Lieutenant Ayerst and Mr. Rand, and these tend to show that they were the result of an organised plot, probably of a more or less political kind, and that the application of restrictive measures adopted for the suppression of the plague was rather the occasion than the cause of these crimes. Surgeon-Captain W. W. O. Beveridge, of the Army Medical Staff, who was engaged from first to last in attempting to check the progress of the plague at Poona and who was intimately acquainted with all the circumstances, does not hesitate to declare that "the charges made against British soldiers are absolute lies." This officer, whose life was probably aimed at, and not that of Lieutenant Ayerst, gives a most satisfactory explanation of British soldiers having been employed in plague work in preference to native soldiers, and he speaks in the highest terms of their bravery and devotion and of the intelligence, patience, and kindness they displayed in all their dealings with the natives. As our readers are aware, we from the first entirely discredited the scandalous charges that had been made, but it is satisfactory to be assured on the most unimpeachable evidence that they are false and malicious. The organisation and mixed composition of the search committees rendered it nearly impossible that such outrages should have occurred. Unfortunately, they were nevertheless accepted on mere hearsay by some persons in this country with most mischievous results and grave injustice to those responsible for our rule in India. Apologies, however full, cannot unfortunately efface these results; the mischief has meanwhile been done, and there will always be some evil-disposed or credulous people ready to believe such reports, in spite of all subsequent contradictions. It was Lord Melbourne, we believe, who remarked that if India were lost to this country it would be by the House of Commons. It is fortunate that the present Viceroy of India and the Governor of Bombay, who have been compelled by the force of the circumstances in which they have found themselves to have recourse to a system of criminal prosecution in support of law and order in India, should have received their appointments at the hands of the late, and not the present, Government, for it is an additional proof of conviction on their parts as to the necessity for acting as they are doing.

THE PETROLEUM HAIR-WASH FATALITY.

THE recent lamentable accident to Mrs. Samuelson has, naturally enough, excited not only widespread sympathy, but is one possessing features of unusual interest, from the point of view of scientific men, as to its *causa causans*, and also from the point of view of those upon whom the duty lies of safeguarding public health, using the term in its widest sense. Despite the verdict of the jury, "That the deceased died from the effect of burning caused by the ignition of petroleum, but how this ignited there was no evidence to show," we think it almost certain that the petroleum, or, to be more accurate, the petroleum spirit, was fired by an electric spark generated from the hair to the hands by friction. That friction of dry hair will generate such sparks is well known, and that such sparks will ignite explosive gases is also well known, as was lucidly set forth by Lord Kelvin in his letter to *The Times* of Aug. 2nd. It seems fairly certain that there was no actual flame in the room where the hair washing took place, but it is possible that the vapour travelled some distance and coming into contact with a distant light flashed back. But on the whole we think the electric spark theory is the more probable, especially as similar conflagrations often happen during the "dry cleaning process" of woollen and other goods. As to the responsibility of the hairdressers we shall say nothing, for the London County Council has, we are glad to see, issued a notice calling attention to the matter, and proceedings are pending as to the legality or otherwise of the use of petroleum spirit. The point to which we do, however, wish to draw special attention is the evidence of the Chief of the Public Control Department of the London County Council, who is reported as saying that "he had visited thirty-eight of the leading hairdressers of London with reference to the application of petroleum hair-wash. He found that twenty-five never used it; thirteen did use it, these being all French establishments; ten had given it up since this accident; three had not done so, and two of these stated that *since the accident there had been a greatly increased demand for petroleum hair-wash.*" (The italics are ours.) Fashion is an inexorable goddess, and we suppose that nothing on earth will make a certain class

of woman give up using anything which may perhaps enhance her beauty. Ignorance may be an excuse for those who used this preparation before the latest misfortune, although at least two deaths were reported from the use of it in a room with a naked light; but ignorance will not serve now, and yet we have the above startling evidence. As in Casimir de la Vigne's poem, it is a case of "On disait 'Pauvre Constance,'" and that is all, and the fashionable world goes on, if not dancing, using all sorts of quack or patent remedies merely because they are fashionable. An occurrence such as this is one more reason for the law as to patent medicines and other preparations being altered. The formula of all these nostrums should be stated on the bottle or package in which they are contained, and meantime we might state that an alcoholic solution of ammonia is quite as efficacious for the cleansing of hair as light petroleum oils, and is not fraught with danger like them.

THE IMMEDIATE REDUCTION OF THE DEFORMITY IN POTT'S DISEASE.

ON July 24th, at the Royal Southern Hospital, Liverpool, Mr. Robert Jones and Mr. A. H. Tubby demonstrated on a series of cases of Pott's disease the manipulations for immediate reduction of deformity. The children's ages varied from three to eight years, and some of the curvatures were very extreme. The deformities were reduced with considerable facility. The forced reduction of the deformity in caries of the spine has been advocated at various times,[1] but it has always met with much opposition. Recently the practice has been revived by Dr. Calot, of Berck-sur-Mer, who had employed it in thirty-seven cases when he wrote his paper.[2] He claimed that the healing process was much accelerated, and that most cases recovered under ten months. The method employed is as follows: forcible traction is made on the upper and lower parts of the spinal column, while firm pressure is exerted over the prominence. When the deformity is reduced a plaster jacket is put on. We believe that the cases mentioned above are the first that have been treated by Calot's method in this country. An exact estimate of the value of the treatment is impossible at the present time.

HOUSE AGENTS AND RENT COLLECTORS AS SANITARY INSPECTORS.

THE sanitary authority of St. James's, Westminster, has made it a condition for the appointment of sanitary inspector that he shall not deal in house property or act as a rent collector or an agent for absentee property in that district. The authority is to be congratulated on this determination, as it is clearly a difficult matter, with human nature constituted as it is at present, for an officer interested in house property to view that property in an altogether unbiased fashion, or, in cases where he has to collect the rent, to order such reconstruction of drains, &c., as will render it a difficult matter to obtain the rent in question. Dr. J. Edmunds, the medical officer of St. James's, Westminster, thinks that a restriction of this nature might well find a place among the regulations of the Local Government Board which appertain to sanitary inspectors, and there is certainly much to be said for the proposal. We have ourselves seen instances where sanitary inspectors who acted also as house agents found great difficulty—that is, if the state of the houses in which they were interested can be taken as an index—in carrying out their duties as inspectors. If, however, we are to reduce this position to its logical conclusion it will be necessary for Parliamentary powers to be obtained to prevent jerry-builders and all persons interested in businesses leading to air and water pollution from occupying seats on district councils. It is the presence of such men as these which prevents the adoption of proper by-laws, the removal of the smoke which envelops our manufacturing towns, and the cleansing of the water courses which traverse them. At the same time, we fully admit that it is the existence of enterprising men, such as large manufacturers frequently are, which contributes in no small degree to our national greatness.

[1] Hare: Practical Observations on the Prevention, Causes, and Treatment of Curvatures of the Spine, 1838.

[2] Semaine Médicale, June 23rd, 1896.

THE CHURCH SANITARY ASSOCIATION.

THE annual sermon of the Church Sanitary Association was preached on Aug. 1st ("Sanitation Sunday") in All Saints' Church, Tufnell Park, London, by the vicar, the Rev. W. J. Hocking. The preacher took for his text the motto of the association, "I will, be thou clean" (St. Mark i. 41), and in the course of his sermon said that two things were beginning to be learned by slow degrees: first, that diseases and pains were not necessarily parts of the economy of human life, but the consequences of imperfect conditions; and secondly, that nine-tenths of the physical ills, diseases, and deformities from which men suffer were traceable to the violation of wise and beneficent laws, and hence were preventable. Science was making it clearer and clearer every day that not only diseases, but a very large proportion of deaths, were attributable to causes evolved out of conditions for which men were, directly or indirectly, responsible. Mr. Hocking also said that it was one of the phases of the Church's mission in every parish to be the teacher of everything that makes for the health of the community—"as well for the body as the soul." Sermons upon the same subject were preached in various parts of the country, the Gospel for the day indicating that concern for the temporal welfare of the people was part of the duty of the Christian ministry. In thus impressing on the masses a sense of the necessity of attending to domestic and personal hygiene the clergy have before them a wide field of usefulness, in which it is possible to benefit their congregations without any excursions into questions of therapeutics. The special feature of the Gospel for last Sunday was the miracle of feeding 4000 persons in the wilderness.

OPERATION FOR HYDATID TUMOUR OF THE SPINAL CORD.

IN a recent number of the *Inter colonial Medical Journal of Australasia* Dr. Jeffreys Wood records a case of very great interest. The patient was a child, aged ten years, without anything significant in his personal history until, at six years of age, he began to wake at night complaining of pain in the back. During the day no pain was complained of. In September, 1893, there was loss of power in the right hand and arm, but this gradually passed away, so that he was able once more to use the hand for writing and with a knife to cut up his food. During 1894 and 1895 the patient remained well and fairly active. About Christmas of the latter year he was noticed to drag the feet in walking. The difficulty in walking increased in the early months of 1896, and in March of that year pain in the left arm was complained of, in addition to the pain in the back and in the right arm, which had been frequent during the previous two years. The left arm also began to waste and the difficulty in walking increased, so that from the commencement of April, 1896, until his admission to the Children's Hospital in May of the same year he was kept in bed, being unable to stand. During this time he lost all power over his legs, bladder, and rectum, and priapism was very troublesome. The pain in the back and arms also increased. On admission to hospital he was found to be a

bright, intelligent boy, with complete motor palsy of the legs, exaggerated knee-jerks, and ankle clonus on both sides. Both arms were much wasted, and the head was drawn towards the left shoulder, and there was inability to turn it to the right. There was complete loss of cutaneous sensibility up to the level of the second rib and there was also anæsthesia over the inner side of each arm. There was ability to flex both arms at the elbow, but extension at the elbow could not be carried out. There was drop-wrist, the fingers were flexed at the mid-phalangeal joint and could not be voluntarily moved. The thenar and hypothenar muscles were wasted, more on the right side than on the left, and the muscles of the right hand did not react to Faradaism; those of the left hand did. The triceps and deltoid on each side showed the reaction of degeneration, and the symptoms were taken to indicate some gradually increasing pressure between the level of the nucleus of the fifth cervical nerve and that of the sixth. The spine was trephined at the level of the fifth cervical spine and the laminæ of this vertebra and of that below it removed with forceps. The cord was seen to fill the canal, and there was no pulsation. A swelling was seen on the right side of the cord. In separating the dura mater from this it was seen to be a hydatid cyst, and on opening it a small amount of hydatid fluid escaped and a number of daughter cysts quickly followed. Considerable difficulty was experienced in getting rid of the daughter cysts, but in all sixteen were removed, together with the mother cyst. After the operation there was a considerable degree of recovery of voluntary power for a short time, but unfortunately symptoms of cerebral meningitis developed, and the boy died eighteen days after the operation. The unfortunate termination of a case so admirably studied and carefully operated upon is much to be regretted.

MEDICINE FOR THE MIND.

LADY MACBETH'S medical attendant was obliged to confess his inability to minister to a mind diseased, but according to the modern school of psycho-neurologists the cleansing of psychically affected brains is by no means beyond the range of medical achievement. In a work which has just been published[1] M. de Fleury combats with great seriousness the old-fashioned hypothesis that bodily ills alone are the province of the practitioner. The disorders of the psychic half of the human economy are every whit as numerous and important, if not more so, than those affecting the somatic half, and everyone reflecting on the havoc they occasion must acknowledge that systematic efforts should be made to render them amenable to treatment. Laziness, grief, and anger are among the mental affections discussed by the writer, not only from a curative, but also from a prophylactic, point of view, but his remarks should be perused in the original. As might perhaps be expected, an entire chapter is devoted to the tender passion under the heading, *La Médecine des Passions*. "Love," says M. de Fleury, "is a physiological phenomenon which enters the domain of pathology the moment it assumes the sentimental form. Do we not habitually say, 'So-and-so is madly in love'? This passion, which is beyond the control of sense, in face of which reason loses her rights and her powers, is incontestably a human malady." The symptoms of *l'Amour-Maladie*, we are further told, bear a wonderful resemblance to those of alcoholism and morphinomania. Everyone who inquires into the facts for himself will be struck with the absolute identity of the pathological processes in each case. The point of departure is different, but the results are precisely similar, and the same treatment—namely, separation—cures both. M. de Fleury's theories are ingenious, but it cannot as yet be said that he has discovered the sweet oblivious antidote which Shakespeare's Thane asked for; nor, for the matter of that, a panacea of any kind for thick-coming fancies.

[1] L'Introduction à la Médecine de l'Esprit. Paris: Alcan, 1897.

THE AUSTRALIAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THE seventh session of the above association will commence on Jan. 6th, 1898, the place of meeting being Sydney. The objects of the association are to give a stronger impulse and a more systematic direction to scientific inquiry; to promote the intercourse of those who cultivate science in different parts of the Australasian colonies and in other countries; to obtain more general attention to the objects of science, and a removal of any disadvantages of a public kind which may impede its progress. The president-elect, who also holds the office of permanent honorary secretary, is Professor A. Liversidge, M.A., LL.D., F.R.S., who will answer any questions addressed to him as to proceedings, &c., and will furnish a list of hotels, apartments, or boarding houses, with tariffs, to members of the association. Inquirers are particularly requested to state the nature and amount of accommodation they may require. The sections into which the subjects for discussion are divided include nearly every department of science other than medical. The steamship and railway companies give reductions in fares to members upon production of their cards of membership. Besides the general meetings, excursions will be organised to various places of interest in the neighbourhood, and this portion of the Congress will no doubt be by no means the least appreciated of the proceedings, for the scenery of the Blue Mountains is as beautiful as any in the world.

TYPHUS FEVER IN LIVERPOOL DURING 1896.

IN these days we hear but little of typhus fever in England, and it will probably be a matter of surprise to many persons to learn that during 1896 there were in Liverpool as many as 305 cases, with 36 deaths, of this disease, as against 162, with 24 deaths, in the previous year—figures which go to show that although this disease was more prevalent in Liverpool during 1896 than during 1895 the fatality rate was lower. The latter fact may be partly accounted for by the circumstance that during 1896 one of the day industrial schools appears to have acted as a centre for disseminating the disease, and that thus the age distribution of the attacks was a favourable one. Dr. Hope tells us that the greater number of the attacks occurred in the south end of the city, in parts notable for "drunkenness, squalour, and filth," circumstances which are almost always found to be associated with this terrible disease. Upon the discovery of a case of typhus fever in Liverpool the patient is at once sent to the isolation hospital and the infected bedding and clothing are destroyed. Furthermore, an inspector visits the house from which the patient is removed every day for a fortnight, and makes minute inquiries as to any other suspicious cases of illness, while regard is also had to all persons who may have visited the house prior to the removal of the patient and the disinfection of his belongings. Notwithstanding these precautions, Dr. Hope remarks that the disease at times remains unrecognised until a localised outbreak attracts attention. As he observes, typhus fever is by no means easy of diagnosis even by persons fairly familiar with its manifestations, and it is obvious that, owing to the rarity of the disease, especially in London, the majority of the younger generation of medical practitioners must have passed through their hospital experience without seeing a case at all. We are accustomed to flatter ourselves that we have practically "stamped out" typhus fever from our

midst, but it may be that ere we succeed in bringing about its total extinction an increased phase of activity of the virus will show us some weak spots in cities other than Liverpool and Dublin.

DR. H. R. SILVESTER: AN UNREQUITED BENEFACTOR.

IT unfortunately happens only too often that benefactors of their fellow men fail to obtain any personal reward or distinction for the important services which they have rendered. A conspicuous example of this kind has lately been suggested to us by a correspondent in the course of a letter on the "Silvester method" of restoring persons after apparent death from drowning and other causes of asphyxia. There can be no doubt that the community has benefited immensely by Dr. Silvester's discovery, the Royal Humane Society alone having recorded hundreds of instances in which it was the means of saving the lives of persons who were to all appearance drowned. Not only the Royal Humane Society, but the Admiralty, the Board of Trade, the Emigration Board, the Coast Guard Service, the National Lifeboat Institution, and various life-saving societies, both in this country and abroad, have approved of the method and directed it to be used by their officials, and in various publications have carefully described the details of the process for the information of seafaring men and the world at large. Dr. Silvester, however, has received only one recognition of his services to the public, the Fothergill medallion, awarded by the Royal Humane Society, a high honour it is true, but the circumstances are exceptional, for the lesson which Dr. Silvester has taught is one to be learned, not only by the medical profession, but by the thousands whose business or pleasure leads them into positions where life may be lost by drowning. The "Silvester method" is, in fact, one of the most useful of life-saving devices, its discoverer happily is still with us, and the present time, when he is retiring from the practice of his profession, would seem to be a fitting occasion for some public appreciation of his valuable work.

MR. RALPH STOCKMAN, M.D., F.R.C.P. Edin., F.R.S. Edin., who has been appointed to the chair of Materia Medica and Therapeutics in the University of Glasgow by the Crown, in room of the late Professor Charteris, holds the position of Lecturer on Materia Medica and Therapeutics in the Edinburgh Extra-mural School, and is Examiner in Materia Medica in the University of Oxford. He has also held the post of Examiner in the same subjects at Victoria and Glasgow Universities.

THE date of delivery of the Bradshaw Lecture by Dr. Markham Skerritt has been fixed for Nov. 4th, 1897. On Nov. 11th Dr. Pavy will deliver a lecture supplementary to his previous Croonian Lectures. The Gulstonian Lectures for 1898 will be delivered by Dr. J. Rose Bradford, the Lumleian Lectures by Sir R. Douglas Powell, and the Croonian Lectures for 1899 by Dr. J. B. Bradbury.

AMONG their appointments to Science Research Scholarships Her Majesty's Commissioners for the Exhibition of 1851 have placed the name of William Alexander Osborne, M.B., of Queen's College, Belfast. These scholarships are of the annual value of £150 and are tenable for two years, and, under special circumstances, for three years.

THE Treasury have appointed a small committee to consider and report upon the desirability of establishing a National Physical Laboratory for the testing and verification of instruments for physical investigation and for other similar purposes. Lord Rayleigh will be chairman, and with him are associated several leading physicists.

AT the Viceregal Lodge, Dublin, on Aug. 2nd, his Excellency the Lord-Lieutenant conferred the honour of knighthood on Mr. George F. Duffey, M.D. Dub., President of the Royal College of Physicians of Ireland; and on Mr. William Thomson, M.D. Q.U.I., President of the Royal College of Surgeons in Ireland.

ENGLISH visitors to the Moscow Congress who may avail themselves of the opportunity of passing through Hamburg are assured of a welcome by the profession there. In another column we publish a letter by Dr. Kümmell, of the Allgemeines Krankenhaus in Hamburg, on this subject.

WE have received from the Foreign Office a Programme of the Conference which is to be held on the subject of Leprosy at Berlin from Oct. 11th until Oct. 16th next. Intending members should communicate with Dr. E. Ehlers, 6, Lanegarde, Copenhagen.

AT a meeting of the Council of the Metropolitan Hospital Sunday Fund held on Thursday, Aug. 5th, at the Mansion House, the sum of nearly £40,000 was recommended to be paid to 132 hospitals and 56 dispensaries.

SIR CHRISTOPHER NIXON, M.D. R.U.I., has been appointed Representative of the Royal University of Ireland on the General Medical Council, in lieu of Sir John Banks, resigned.

THIRTY-FIVE duly qualified medical practitioners have applied for the post of superintendent of the Aberdeen Royal Infirmary.

THE London University Commission Bill has shared the fate of other opposed measures and has been withdrawn.

Pharmacology and Therapeutics.

TREATMENT OF HYDROCELE BY CARBOLIC WATER.

WHAT appears to be both a simple and effective method of dealing with hydroceles has been practised for the last couple of years by Dr. Pilate and Dr. Vissemans in the Orleans Military Hospital. It consists in the washing out of the cavity of the tunica vaginalis—after evacuation, of course—with a weak solution of carbolic acid. The surface is first cleaned with soap and brush and then washed with a solution of perchloride of mercury. The trocar is then inserted, and after the serous fluid has been drawn off warm carbolic water of the strength of 3 per cent., which has been previously boiled, is injected. This is allowed to come out, and is seen to be turbid, containing fibrinous flocculi. The washing out is repeated four or five times until the liquid emerges from the cannula quite clear. The instrument is then withdrawn and the puncture closed in the usual way, a suspensory bandage being put on. Owing to the anæsthetic effect of the carbolic acid the patient feels no pain. Some further effusion into the sac usually occurs in four or five days, but this soon subsides and the patient can resume his ordinary work. He is advised, however, to continue to wear the suspensory bandage for a time. This treatment has proved quite satisfactory, but is only recommended in simple cases occurring in young subjects.

NUTRITIVE EFFECT OF SUBCUTANEOUS INJECTIONS OF OIL.

Dr. Fornaca and Dr. Micheli, of Professor Bozzolo's clinic in Turin, have made a series of trials of the effects to be obtained by injecting oil under the skin. They find that a dose of from 30 to 200 grammes introduced in this way is rapidly absorbed, and that it produces a marked decrease in the quantity of nitrogen eliminated, thus of course allowing more to remain in the tissues without undergoing metabolic change, the body weight increasing and the general condition being improved. It would appear that oil introduced subcutaneously has much the same nutritive value as when it is ingested, and produces better effects that when it is injected per rectum. Indeed, it seems to these investigators that the hypodermic might be substituted for the rectal method in most

of the cases in which the latter is usually employed. Two of the subjects on whom observations were made were suffering from diabetes. In one of these cases 1780 cubic centimetres were injected in the course of thirteen days, and produced a remarkable diminution in the quantity of nitrogen eliminated and in the amount of sugar excreted, together with a slight increase in the body weight. No alteration was found in the quantity of urine passed. In the other case it was not possible to inject more than 310 grammes in four days, but even this small amount produced some decrease in the amount of nitrogen eliminated.

RECTAL FEEDING IN TYPHOID FEVER.

For some time past Dr. Queirolo, Professor of Clinical Medicine in the University of Pisa, has been in the habit of feeding his cases of typhoid fever entirely by the rectum in order to afford the diseased bowel complete rest. The nutrient enemata are given four times daily, and consist of triturated meat and pancreas with a few drops of laudanum, each injection being preceded by irrigation of the bowel with boracic acid—the plan, in fact, advocated by Leube. The patients are allowed to drink hydrochloric acid lemonade. In this way the digestive tract is preserved from putrescible substances, and this Dr. Queirolo considers obviates one of the most fruitful sources of auto-toxic action. All the cases treated on this system, many of them of a very severe type, are stated to have recovered.

The Lancet Special Commission
ON
SICILY
AS A HEALTH RESORT.

V.[1]

Consideration of the Suitability of Sicily as a Health Resort for cases of (1) Bronchitis and Bronchial Asthma; (2) Laryngeal Affections; (3) Impaired Convalescence; (4) "Scrofula" and "lymphatisme"; (5) Senile Affections; (6) Anæmia and Chlorosis; (7) Nervous Diseases; and (8) Phthisis.—Sicily as a Summer Station.—Gibilmanna.—Accommodation in Sicily.—Deficiency of Artificial Attractions.—Question of Brigandage.—Season for Visiting Sicily.—Richness of Sicily in Matters of Historic and Antiquarian Interest.—Renan and Goethe.—Concluding Remarks.

IN the previous articles the data—meteorological and botanical—for forming a correct estimate of the climate of Sicily have been sufficiently set forth. It was found that the climate was intermediate between that of Europe and Africa, and that its leading characteristics were warmth, mildness, brightness, breeziness, equability, and moderate humidity, and that the proportion of fine weather, free from extremes, was remarkably high. It was further pointed out that the physiological action of the climate upon the human organism might be described as (1) moderately tonic and (2) sedative. It remains to inquire in detail what are the morbid conditions likely to be benefited by a temporary residence in Sicily—or, in other words, what is the special utility of the island as a health resort. The following statements embody the experience and opinions of the leading Sicilian physicians who have been kind enough to furnish THE LANCET Special Commissioner with their views.

(1) *Bronchial affections, especially the dry and irritable varieties, and including bronchial asthma.*—All authorities are unanimous that these affections do exceptionally well in Sicily. That is a conclusion which theoretical considerations would strongly suggest, and which practical experience is found to corroborate. A climate which is warm without extreme heat, neither excessively dry nor excessively humid, almost exempt from frost, snow, and cold winds, and which presents a remarkable degree of diurnal, mensual, and annual equability would naturally suggest itself as highly favourable for bronchial affections. Further, the unquestionably sedative influence of the climate upon the nervous system adds the additional element which is desirable in bronchial affections of an irritable or spasmodic type. On the other hand, cases of bronchitis attended by profuse secretion, whether or not amounting to actual bronchorrhœa, do not progress favourably in Sicily, inasmuch as they require a drier atmosphere. Bronchial asthma is well known to be a most erratic affection, for which it is difficult to select a suitable climate, but all the Sicilian observers are unanimous that, on the whole, it does well in Sicily.

(2) *Laryngeal affections.*—The remarks just made with regard to bronchial affections may be substantially repeated with regard to laryngeal affections. The dry and irritable varieties do extremely well in Sicily—the moist varieties do not do well. Tuberculous laryngitis will be considered in connexion with phthisis.

(3) *Impaired convalescence after wasting diseases, after-effects of the specific fevers, malaria, bone and joint diseases, pneumonia, pleurisy, &c.*—This large class of patients on the whole do well in Sicily. The mildly tonic influence of the climate seems to promote the recuperative processes without stimulating the dregs of these diseases to renewed activity. The large proportion of mild, sunny weather permitting regular exercise almost daily is much in favour of these cases. Convalescents sufficiently advanced towards recovery to require a distinctly bracing climate should not be sent to Sicily.

(4) *"Scrofula" and "lymphatisme."*—These cases do well in Sicily for reasons analogous to those which render the climate favourable for convalescents. As regards British patients of this class, only the more delicate cases are suitable for Sicily. The more robust patients will generally be found to do better at Margate, Broadstairs, Folkestone, or perhaps Biarritz.

(5) *Senile affections.*—These cases do well in Sicily, the warmth and equability of the climate and its mildly sedative influence being highly favourable to them. Elderly patients, who are free from grave organic disease, but who feel the weight of years and are depressed by the gloom and cold of the British winter, would in most cases benefit decidedly by wintering in Sicily. The bronchitis and dyspepsia from which they so often suffer would be relieved, and the generally mildly tonic influence of the climate suits their case. These patients are often sent to the Riviera, and frequently with benefit, but the Riviera climate is too exciting for many of them—insomnia resulting—and the mistral tries them severely.

(6) *Anæmia and chlorosis.*—These cases do well in Sicily, the large amount of sunshine and ample facilities for out-door exercise promoting digestion and sanguification.

(7) *Irritable nerve affections, including hysteria and neurasthenia.*—These cases are likely to benefit by the mildly sedative influence of the Sicilian climate. The great scenic attraction of the island and its historic and antiquarian interest may prove valuable in certain cases of nerve disorder. Insomnia will probably be favourably affected.

(8) *Phthisis.*—This disease requires somewhat fuller consideration for various reasons. It is the chief disease for which climatic change is usually sought, its climatic treatment is admittedly a very difficult matter, and the Sicilian physicians are not unanimous regarding the results obtained at the Sicilian sanatoria. It has been shown that phthisis is common in Sicily, but that its prevalence is below the general European average, and Professor Ugetti's remarkable figures tending to show the comparative exemption of Catania have been given, although they cannot be regarded as in any sense final and conclusive. The Sicilian practitioners in general are guarded in their statements respecting the results of treatment obtained among foreign phthisical patients wintering in Sicily. Many cases would appear to do well, some very well, and even the least promising cases—e.g., laryngitis tuberculosa—are sometimes relieved, but the general results are doubtful in nature, and the suitability of the climate for phthisical patients is still a moot point. Where practical experience speaks with doubtful voice it is fair to inquire what light can be thrown on this important subject by the general principles known to apply to the climatic treatment of phthisis. Are there cases of the disease likely to benefit by wintering in a climate characterised by warmth, mildness, equability, moderate humidity, &c., or not? Are there cases, on the other hand, upon which the effect of such a climate will be either neutral or injurious? These questions admit of a more or less definite answer. The ground may be somewhat cleared by

[1] Nos. I., II., III., and IV., were published in THE LANCET of June 5th and 12th, and July 3rd and 24th, 1897, respectively.

laying down the principle that cases of phthisis likely to be benefited by the Alpine sanatoria should not be sent to Sicily. If the disease be early, limited in extent, and not very active; if the general constitutional state be fairly good; if the vascular and digestive systems are sound; and if there be no general bronchitis, rheumatism, or nervous disorder—then the patient should in most cases be sent to a distinctly tonic climate such as Davos, the South African Highlands, or Colorado. But it must be admitted that the above type of case forms only a small minority of phthisical patients. The majority of these cases present either marked constitutional debility, or activity of the tuberculous process or serious digestive defect, or bronchial, cardiac or nervous complications; and where such symptoms are present the recommendation of the elevated sanatoria is distinctly perilous, although even in the most unlikely cases a brilliant success may sometimes be obtained. Excluding from consideration those cases of phthisis where for various reasons climatic change must be altogether prohibited, there remains a large class where general or digestive debility, anæmia, low vascular tone, bronchial irritability, nerve disorder, or some other cause, precludes resort to the elevated sanatoria. In such cases the choice at present rests in most instances between the sea-voyage, the Riviera, Madeira, and the Canary Islands, the North African sanatoria, viz., Egypt, Algiers, and Tunis, or the Australasian colonies. The question arises whether in a certain proportion of such cases Sicily might be tried with benefit. It is probable that good results might be obtained in the following varieties of phthisis—viz: (*a*) Early phthisis complicated by anæmia, low vascular tone or nervous irritability. In such cases the tonic and soothing qualities of the Sicilian climate might be expected to act favourably. (*b*) In cases of phthisis of the catarrhal variety. The admitted efficacy of the Sicilian climate in bronchial conditions would suggest its suitability for catarrhal phthisis. (*c*) In cases of laryngitis tuberculosa. In such cases the prognosis is always grave and usually very bad, but the soothing qualities of the Sicilian climate and its well-known utility in irritable laryngeal states render the prospect of some temporary benefit fairly hopeful. Experience has shown that this expectation is sometimes justified by the event.

Among the diseases upon which the influence of the Sicilian climate is, on the whole, injurious may be mentioned rheumatism and renal affections. Ophthalmia in many of its forms might be added to these.

Some not unimportant differences exist between the various Sicilian localities with regard to their suitability to different states of disease. For bronchial, laryngeal, and irritable nervous affections it is probable that Palermo and its vicinity offer the greatest advantages. For phthisis the environs of Catania and Acireale would seem most suitable. For convalescents from acute diseases Taormina offers unrivalled attractions. In most of the other morbid conditions enumerated as likely to benefit by the Sicilian climate the choice of special localities is probably unimportant. Syracuse is, on the whole, unsuitable for a health resort. Girgenti has not hitherto been much frequented by invalids, but it has considerable claims to attention from the point of view of climate and may have a future before it.

The above remarks apply more particularly to Sicily as a winter resort, but there can be little doubt that the island offers considerable attractions as a summer station—especially for residents in Algeria, Tunis, and Egypt. The slopes of Mount Etna and of the Madonian mountains present almost every grade of temperature and variety of climate, and a summer sanatorium might easily be founded in one or other of these localities. The Marchese di Gallidoro writes as follows to THE LANCET Commissioner: "Of all places in Sicily that have been proposed as an Alpine climatic station I think the most suitable is Gibilmanna (Mountain of the Manna, from the manna tree, Fraxinus ornus, which from time immemorial has been largely cultivated on its slopes). It can be easily reached from Palermo by taking the train (one hour) to Cefalù, whence a tolerably good mule path leads to Gibilmanna in an hour and a half. The Capuchin convent and shrine of the Madonna are about 900 metres above the sea level. In close proximity there is an extensive plantation of stately oak trees, and close by rises Pizzo S. Angelo, between 1200 and 1300 metres high, which may be considered as an isolated eminence on a spur of the great Madonian range, and can be reached in about an hour's easy walk. There is an abundant supply of fresh water, the view is as extensive as it is beautiful and varied, and the climate is as fresh, healthy, and invigorating as can be desired." The question of establishing a sanatorium in Silicy for invalided soldiers and civilians from Egypt, Malta, and perhaps India has been more than once mooted, and is deserving of serious consideration. There seems every reason to believe that in Taormina there is to be found a sanatorium of exceptional value for convalescents from malaria, the specific fevers, inflammatory affections of the lungs and pleura, wounds, accidents, &c. When it is remembered that Taormina is about twelve hours' journey from Malta, its convenience and accessibility are manifest.

Sicily is well adapted to serve as an intermediate station for patients *en route* to or from Tunis or Egypt. Especially does this apply to patients who have wintered at Luxor, Helouan, or Cairo and who find themselves compelled to leave in the month of March. To cross the Mediterranean directly at this season and face the abrupt climatic change which this involves is in many cases imprudent and undesirable, and the selection of a suitable intermediate station has long been a matter of great difficulty. Sicily may be recommended with confidence as well suited to cases of this kind. March is an excellent month there, and April is also good. The patient who has just come fresh from the sublime remains of ancient Egyptian art will find much to interest and instruct him in Sicily, and in no other way can he so safely and so pleasantly bridge over the gulf between the climate of Egypt and that of the Riviera, Pau, Biarritz, or Arcachon. Breaking their homeward journey in Sicily may be safely advised as a good routine rule for patients who have wintered in Egypt.

The question of the nature and amount of the accommodation to be found in Sicily can be touched on only very lightly here. On the whole, the traveller will probably be agreeably disappointed on this score. In Palermo there are a number of hotels of the first-class where the tourist or invalid can count upon every comfort and attention. In Girgenti, Catania, and Taormina the accommodation is also good. The great "bath establishments" of Termini-Imerese and Acireale are comfortable and well-equipped. On the other hand, in most of the small towns and country places the accommodation is often of the most primitive description, and the average Sicilian inn is not to be lightly ventured upon, even by the seasoned traveller, still less by the invalid. The national standard of cleanliness is not high, and the mildness of the climate is only too favourable to insect life. In special provision for the wants of invalids Sicily at present is very deficient. "Pensions" are few in number and not usually comfortable or adapted to the needs of the ailing, and furnished apartments are not, as a rule, organised to meet the wants of the invalid. In these points, however, efforts are being put forth to remedy existing defects, and it may be expected that substantial progress will soon be made. What is most required is a number of "pensions" or small private hotels, removed, if possible, from the great centres of population, and situated in quiet, airy, and healthy localities. In such institutions the special wants of *poitrinaires* or other invalids could be met and the mode of life arranged for their benefit in a way which is impossible in a large hotel where the great majority of visitors are healthy people. The environs of Palermo and Catania present many spots particularly well suited for institutions of this sort, and Girgenti and Taormina also offer unusual advantages.

Sicily is deficient also in those attractions which go far to make the fortune of such resorts as Homburg and Spa, Nice and Monte Carlo—viz., the Kursaal, the Casino, the racecourse, the fashionable promenade, the bands of paid musicians. This is not an unmixed disadvantage, perhaps, inasmuch as the pursuit of health and the pursuit of pleasure are not easily compatible. The gaiety of life upon the Riviera, for example, does not add to its utility as a resort for serious invalids, while no doubt increasing its attractiveness to the holiday maker and pleasure seeker. But there is a mean to be observed in this, as in most other things. A sanatorium should not be a centre of dissipation, neither should it be given up to dulness and gloom. Disease and absence from home are depressing; time hangs heavily on the invalid condemned to an enforced and unwelcome idleness; hence some provision for reasonable and healthful amusement is indispensable for every health resort, which aspires to hold its own amidst the ever-increasing number of rival sanatoria. Parks with sheltered walks, where good music could be heard at stated times, clubs, libraries, and

reading-rooms, tennis courts, and golf-grounds; these are a few of the measures which naturally suggest themselves in this connexion.

It would not be possible to deal exhaustively with Sicily as a health resort and omit all reference to a matter which naturally arises to the mind of the English reader in association with the island—namely, the subject of brigandage. On this question a great deal of misconception exists, and Sicily is now suffering in repute for events which belong to the past, rather than to the present. Broadly speaking, it may be affirmed that while the security of life and property in Sicily is below the general European average, and leaves much to be desired, organised brigandage has practically ceased to exist in the island. Crimes of violence (especially the use of the knife)—the result of family feuds, love quarrels, and starvation—are common in Sicily, and the offender often takes to the mountains, sometimes associating there with others in like plight, but this is for the most part the worst that can be said. Count Mazzarino informed our Commissioner that he had been in the habit for years of visiting all parts of Sicily, even the most remote, unarmed and unattended, and that he had never been molested in any way. A prominent Englishman recently drove all over the island, with his wife, in an open carriage without escorts and had no reason to regret his hardihood. All information tends to show that even in past days, when brigandage was admittedly an evil of great magnitude, tourists and foreign visitors were in no case molested. The real victims were wealthy residents who were known to the brigands, and for whom a substantial ransom might be expected.

The choice of season for visiting Sicily will depend upon the objects and state of health of the traveller. To those who propose to winter in the island an arrival in the early days of November may be recommended, and the date of departure may be safely postponed until the end of April or the beginning of May. Travellers for pleasure only will find February, March, and April the most suitable months. At that season, as already stated, the weather in Sicily is often the best in Europe, being for the most part bright and mild without cold winds or extremes of temperature. The amount of rain varies within wide limits, and is sometimes considerable. The early autumn (September and the first half of October) is not a favourable time for visiting Sicily, but the latter part of October and the month of November may be chosen, although much less suitable than the spring months.

In the selection of a sanatorium climatic and hygienic questions no doubt claim the first place, but they are not the only points worthy of consideration. The general attractiveness of a locality, the facilities it affords for recreation, study or research, the distractions which it can offer to the traveller or invalid—these are matters of great, and in some cases (e.g. nervous invalids) of primary importance. From this point of view Sicily takes a high place in the front rank of European sanatoria. It would be difficult to name any locality in Europe which combines so much natural beauty with such wealth of historic and antiquarian interest or which unites so many points of interest to any educated individual. The following sentence of Renan may here be recalled: "Je l'avoue, il me serait impossible de résider ou même de voyager avec goût dans un pays où il n'y aurait ni archives ni antiquités. Ce qui fait l'intérêt et la beauté des choses, c'est le cachet de l'homme qui y a passé, aimé, souffert." (I declare that it would be impossible to me to live or even to travel with pleasure in any country which possessed neither history nor antiquities. What really gives interest and beauty to things is the mark that there man has been, that there he has loved and suffered.) From this point of view Sicily is almost unique. Her history is one of the most ancient, chequered, and pathetic which human annals present. Her remains of antiquity are among the most extensive and the most moving in the world. As the traveller stands in front of the great temple of Segesta and beholds the majestic ruin standing amidst a scene of indescribable loneliness, or as he climbs the precipitous streets and narrow alleys of modern Girgenti and thinks of the grandeur of ancient Acragas, "the most beautiful city of mortals," as Pindar calls it, or as he takes his place in the Greek theatre of Syracuse and surveys the ruin and desolation around him, the great harbour, in the distance the purple Ionian Sea, and on the northern horizon the snowy dome of mighty Etna—he feels that nature and art, history and myth, poetry and romance have combined to make Sicily an enchanted land. Subtle suggestions of the south arise to heighten the impression. Wherever he goes in Sicily he is reminded that just below the southern horizon lies the great Dark Continent. The waving date-palm and the prickly pear, the Moorish arch in the cathedral, and the Saracenic water-tower by the wayside, the careless grace with which the peasant bestrides his mule, recalling the Kabyle or the Bedouin, the touch of negroid type in an occasional face, the breath of the sirocco—these speak of Africa and of the desert. Many of the greatest minds have felt the subtle charm of Sicily. Homer sang its praises in the dim dawn of poetry, although the vagueness of his references make it improbable that he ever visited the island. The trumpet tones of Pindar proclaimed its glories to a later age. Virgil and Cicero, and in modern times Goethe and Schiller, have written of Sicily. There is a tradition that the first suggestion of Mignon's song came to Goethe as he stood upon the terrace of the church of San Gregorio, which overlooks the straits of Messina. Whether or not this tradition be true, there can be no doubt that this song is full of the odour and subtle suggestion of Sicily and of the South—especially in its opening verse:—

"Kennst du das Land, wo die Citronen blühn,
Im dunkeln Laub die Gold-Orangen glühn,
Ein sanfter Wind vom blauen Himmel weht,
Die Myrte still und hoch der Lorbeer steht?
Kennst du es wohl?
Dahin! Dahin
Möcht' ich mit dir, o mein Geliebter, ziehn."

"Know'st thou the land where lemon trees do bloom,
And oranges like gold in leafy gloom;
A gentle wind from deep blue heaven blows,
The myrtle thick, and high the laurel grows?
Know'st thou it, then?
'Tis there; 'tis there,
O my beloved one, I with thee would go!"
(*Carlyle's translation.*)

Sicily has passed through much racial strife and many dynastic vicissitudes. Her troubles at present are chiefly economic. The tyrant is gone, perhaps for ever, but the tax-gatherer remains. Poverty abounds in the island and even the pale shade of starvation is not far off. But in many things there is progress, and above all the general advance in education is marked and unmistakeable. The seed is being sown, and the harvest—even if late—will some day appear. May the charming island renew something of her ancient glory and once again become the abode of a prosperous, happy, and contented people.

THE MEDICAL, SURGICAL, AND HYGIENIC EXHIBITION.

(*Concluded from p. 278.*)

WE may next deal with the representative display of foods and food products. Here, perhaps, the Aylesbury Dairy Co., of 31, St. Petersburgh-place, W., were to the fore. Their stall included such well-known preparations as humanised milk, peptonised milk, sterilised milk and cream, sterilised food for infants, cream milk for infants, and Koumiss of varying degrees of fermentation. Next should be mentioned the great number of laboratory products which formed the chief feature of Messrs. Armour and Co.'s (59, Tooley-street, S.E.) stall; this included the animal ferments, desiccated powder, tablets of animal substances, thyroid tablets, and concentrated extract of beef, with and without beef fibre. Messrs. Beanes and Co., of Wallace-road, Hackney Wick, N.E., brought to the notice of the visitors their excellent preparation known as "Diastased Farina," which by itself possesses digestive properties and is therefore well adapted as a food for infants and invalids. Messrs. G. Van Abbott and Sons, of 6, Duke-street Mansions, Grosvenor-square, W., showed samples from their very comprehensive list of foods for the diabetic. The preparations of interest to medical men in the exhibit of Messrs. Sadler, Firth and Ross, of 26, Gt. Guildford-street, S.E., were mustard oil and mustard bran for medical application. In addition this firm showed excellent specimens of the condiment. Of the recent additions to the list of really good beef preparations must be reckoned Vimbos prepared by the Vimbos Co., of 130, Queen Victoria-street E.C.; one marked property this fluid preparation possesses being its excellent flavour. We have already described the humanised milk

prepared by Dr. Gaertner's process.[1] The resulting product contains a soft flocculent curd in an easily assimilable state, while the sterilising process is not carried too far. Samples were shown by the Friern Manor Dairy Farm, Ltd., of 20, Farringdon-street, E.C. Some choice cereal preparations adorned the stall of Mr. B. Lampe, of 181, Queen Victoria-street; they were all characteristic in size and quality of American growths. The well-known preparations of the Liebig Extract of Meat Co., of 9, Fenchurch-avenue, E.C., were submitted for inspection and trial, while Messrs. Broomfield and Co., of 83, Upper Thames-street, E.C., described the advantages of Albene, a pure refined vegetable fat which is said to be easy of digestion, and not liable to become rancid. It is stated to be useful in cooking, and also as a suitable ointment base. The first malt extract ever prepared (Leopold Hoff, 29, New Bridge-street, E.C.) found a place in the exhibition. It presents the active and nutritive quantities of malt in a fluid and agreeable form. On Messrs. Mellin's (Stafford-street, Peckham, S.E.) stall were to be seen their well-known foods for infants and invalids, which consist largely of food products partially prepared for easy assimilation by the action of diastase. The exhibit also included an emulsion of cod liver oil and hypophosphites. An attractive assortment of diabetic foods was presented by Messrs. Callard and Co., of 65, Regent-street, W., while not far away were the Hovis preparations of flour, bread, and biscuits of Messrs. S. Fitton and Son, Macclesfield. An excellent idea of the improvements which modern investigation has required at the hands of those responsible for the quality and purity of our dairy produce, could be gained by an inspection of the excellent exhibit of Messrs. Welford and Sons, of Elgin-avenue, Maida Vale, W. Then should be mentioned the great number of Bovril preparations exhibited by the Bovril Co., of 30, Farringdon-street, E.C., and, also, the excellent food and milk prepared by Henri Nestlé, of 48, Cannon-street, E.C., and the preparations of the Anglo-Swiss Condensed Milk Company, of 10, Mark-lane, E.C., which are guaranteed to contain a maximum of cream.

We may now briefly review the mineral and medicinal waters that were exhibited in addition to other allied products and the appliances connected therewith. Messrs. Ingram and Royle, of 26, Upper Thames-street, E.C., made an excellent display of the many natural mineral waters for the sale of which they are the agents. Thus were shown the various natural mineral waters of Vichy, the Carlsbad salts, and Hunyadi Janos. An excellent illustration of the improvements recently brought to bear upon the manufacture of aerated waters was shown in the exhibit of Messrs. Idris and Co., of Camden Town, N.W., the purity of the aerated waters of this firm being well known. Not far off was an interesting exhibit by the Compressed Gas Co., Ltd., of 181, Queen Victoria-street. Here were shown machines for directly converting any liquid placed in a bottle into an aerated beverage. The machines are suitable for domestic and general use, and are useful for aerating milk. Included in the same exhibit was an icing and cooling apparatus by means of carbonic acid gas. Both would be valuable for hospital use. What is described as a new natural mineral water for use in the treatment of gout and gouty diathesis and sundry diseases of the kidneys and bladder is the water from the "Kronenquelle" exhibited by Messrs. W. Schacht and Co., of 27, Finsbury-pavement, E.C. The Holyrood Table Water, prepared by Messrs. Macfarlan and Co., of 9, Moor-lane, E.C., is worthy of mention as a new artificial water introduced by this firm the composition of which is founded on analyses of the best imported waters. The aerated waters prepared by the Chemists' Aerated and Mineral Waters Association, of Gifford-street, Caledonian-road, N., were brought prominently to the notice of the visitors in the vestibule of the hall, where huge syphons were displayed illuminated from the interior by red electric glow-lamps.

Lastly, a very important exhibit—which was allotted especial space in a room adjoining the hall, and one which deservedly attracted considerable interest—was that of the West-end Pathological Laboratory, under the control of Mr. Severn and Mr. Groth, the secretary. This consisted of numerous characteristic pure cultivations of bacteria in various nutrient media, besides a collection of mounted slides of some of the rarer micro-organisms under oil immersion lenses. Among these the preparations of the organisms occurring in diphtheria, trachoma, bubonic plague, catarrhal ophthalmia, and certain hair and skin fungi were especially to be commended. Mr. Severn also showed some accurately coloured drawings of pathogenic bacteria and excellent photo-micrographs and radiographs. Amongst the novelties of this exhibit were also the demonstrations by Mr. Townsend of Dr. Oliver's hæmoglobinometer and cytometer, and of the Tintometer Company's other apparatus.

[1] THE LANCET, July 3rd, 1897, p. 26.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE quarterly Comitia of the Fellows was held on July 29th, the President, Sir SAMUEL WILKS, Bart., being in the chair.

It was announced that the Gulstonian Lectures for 1898 would be delivered by Dr. J. Rose Bradford, the Lumleian Lectures by Sir R. Douglas Powell, and the Croonian Lectures for 1899 by Dr. J. B. Bradbury. The date of delivery of the Bradshaw Lecture by Dr. Markham Skerritt this year was fixed for Nov. 4th, and on Nov. 11th Dr. Pavy will give a lecture supplementary to his previous Croonian Lectures.

On the motion of the Senior Censor (Dr. Church) the hearty congratulations of the College were voted to the President upon the honour conferred upon him by Her Majesty. The vote was carried by acclamation, the Fellows standing. It was acknowledged by the President in suitable terms, attributing the honour to the office to which he had been called by the votes of the Fellows.

The following gentlemen were admitted to the Membership of the College:—Donald John Armour, B.A., M.B. Toronto; Francis Henry Edwards, M.D. Brussels; Robert Hutchison, M.D. Edin.; Alexander McGregor, M.D. Aberdeen; and Arthur Francis Stabb, M.B. Camb.

The PRESIDENT announced that the Treasurer (Sir Dyce Duckworth), Dr. Pavy, and Dr. Lauder Brunton would represent the College at the forthcoming International Medical Congress at Moscow.

Licences were granted to the 146 candidates who were successful at the recent examination, and the diploma of Public Health of the two Colleges was granted to those who had passed the examinations for that purpose.

On the invitation of the President the Registrar read an account of the proceedings attending the admission of H.R.H. the Prince of Wales to the Honorary Fellowship.[1]

A communication was read from the Home Secretary stating that Her Majesty had been graciously pleased to accept the address presented by the College on the occasion of the completion of the sixtieth year of Her Majesty's reign.

Communications were read from the Secretary of the Royal College of Surgeons of England reporting the proceedings of its Council.

A communication was read from the Educational Committee of the Medico-Psychological Association, enclosing a Syllabus of Instruction in the subject of Insanity approved by the committee. On the motion of Dr. Norman Moore, seconded by the Senior Censor, the syllabus was referred to the committee of management for transmission to the examiners.

A communication from Dr. R. R. Rentoul forwarding a copy of his Draft Bill for the Registration of Midwifery and other Nurses was received.

A communication from the Foreign Office was read enclosing documents received through the German Ambassador upon the subject of an International Conference on Leprosy which is to assemble in Berlin in the month of October. The programme of the proceedings was forwarded with an expression of the hope that its contents would be made known to the medical profession in this country, who are invited to share in the Conference.

The PRESIDENT announced that the London University Commission Bill, which had just passed through the House of Lords, had been considered by the Standing Committee of the College upon the university question, and also by the delegates of the two Royal Colleges, and it was a question whether it might not be advisable for the College to pass a resolution expressing approval of the measure, in order to

[1] Vide THE LANCET, July 31st, 1897.

strengthen the hands of the Government in its passage through the House of Commons.

Dr. PYE SMITH accordingly moved a resolution in this sense, remarking that the Bill fulfilled the real object in view—namely, the formation of a great teaching university in London, and that it had received the approval of all the other bodies concerned. In urging the Government to pass the Bill the College would be acting in harmony with its previous action on the subject.

Dr. ALLCHIN, in seconding the resolution, pointed out in what particulars the measure differed from that of last year, and he did not consider that the changes were such as to affect the position of the Royal Colleges and the medical schools

Dr. PAYNE thought that the position assigned to the medical schools was less satisfactory than in the previous Bill, since they would now come in as teachers and not as corporate institutions.

Dr. SANSOM expressed his warm approval of the measure, which he considered to be a fair compromise that would work well.

Sir W. PRIESTLEY gladly supported the resolution, but feared that the Government would have to abandon the measure should the threatened opposition be persisted in.

Dr. ISAMBARD OWEN deprecated the passing of a resolution without due consideration of the scheme.

Dr. NORMAN MOORE, however, said that in passing such a resolution the College would be acting consistently with its previous action. The resolution was then put and carried almost unanimously.

On the motion of the Registrar it was resolved for the first time that certain by-laws relating to Licentiates be enacted, re-enacted, or repealed, to conform with the changes recently effected in the examinations of the Conjoint Board.

On the motion of the Senior Censor, seconded by Dr. STEPHEN MACKENZIE, the following report of the Council was adopted:—

"The Council of the Royal College of Physicians, having considered with great care the memorial submitted to the College by the Hospital Reform Association, is of opinion that it is impossible for the College to make, in the words of the memorial, 'searching investigation into the present system of dispensing out-of-door medical relief at the hospitals, infirmaries, and dispensaries, not only in the metropolis, but in all the large provincial towns.'"

On the motion of the Senior Censor, seconded by Dr. ORD, it was unanimously resolved to adopt the recommendation of the Council to award the Moxon Medal to Sir Samuel Wilks, Bart., President of the College, "as having especially distinguished himself by observation and research in clinical medicine."

On the motion of Dr. PAYNE, seconded by Dr. ALLCHIN, it was unanimously resolved to adopt the recommendation of the Council to award the Baly medal to Professor Schäfer of University College, London, "as having especially distinguished himself in the science of physiology"

Reports were received from (*a*) the representative of the College in the General Medical Council, (*b*) the Finance Committee, (*c*) the Committee of Management, and (*d*) the Laboratories' Committee. In addition to their usual quarterly report on the work in progress at the laboratories this committee presented a special report upon the subject of standardising antitoxin, and recommending that the director should be authorised by the Royal Colleges to issue official certificates after testing the quality of samples of antitoxin submitted to him for this purpose Some discussion ensued, shared in by Dr. PAVY, Dr. PYE-SMITH, Dr. KANTHACK, Dr. S. MARTIN, Dr. POORE, and Dr. HERON, and the recommendation was adopted.

Reports were also received from the Library Committee, the Curators of the Museum, and the Examiners for the Licence.

A list of books presented to the Library during the past quarter was handed in, and the thanks of the College voted to the donors. The thanks of the College were also given to Lady Russell Reynolds for the gift of two handsomely bound copies of Sir J. Russell Reynolds's "Addresses," to Sir Richard Quain for the gift of a photogravure portrait of himself, and to Dr. O'Neill, of Lincoln, for some valuable Roman remains found in that city.

The following is a list of the Censors and other officers elected for the ensuing year:—Censors: Dr. Samuel Jones Gee, Dr. Henry Charlton Bastian, Dr. Joseph Frank Payne, and Dr. William Miller Ord. Treasurer: Sir Dyce Duckworth. Emeritus Registrar: Sir Henry Pitman. Registrar: Dr. Edward Liveing. Harveian Librarian: Dr. William Munk Elected Members of the Library Committee: Dr. Samuel Jones Gee, Dr. Philip Henry Pye-Smith, Dr. George Vivian Poore, and Dr. William Henry Allchin. Curators of the Museum: Dr. William Howship Dickinson, Dr. Henry Charlton Bastian, Dr. William Cayley, and Dr. Norman Moore. Finance Committee: Dr. Alfred Baynard Duffin, Dr. George Vivian Poore, and Dr. John Mitchell Bruce. Examiners: Chemistry and Chemical Physics: Mr. William Ramsay, F.R.S., Mr. Richard Tayler Plimpton, Ph.D., Mr. John Millar Thomson, F.R.S., Mr. Percy Faraday Frankland, Ph.D., F.R.S., and Mr. Frederick Daniel Chattaway, Ph.D., D.Sc. Materia Medica and Pharmacy: Dr. Francis Warner, Dr. William Carter, Dr. Nestor Isidore Charles Tirard, Dr. Sidney Philip Phillips, and Dr. James Calvert. Elementary Physiology: Dr. Henry Lewis Jones. Physiology: Dr. Vincent Dormer Harris, Dr. William Dobinson Halliburton, and Dr. John Wychenford Washbourn. Anatomy: Mr. George Robertson Turner and Mr. George Dancer Thane. Medical Anatomy and Principles and Practice of Medicine: Dr. William Cayley, Dr. Thomas Henry Green, Dr. Thomas Lauder Brunton, Dr. Isaac Burney Yeo, Dr. Arthur Ernest Sansom, Dr. Horatio Bryan Donkin, Dr. Thomas Barlow, Dr. William Ewart, Dr. David Bridge Lees, and Dr. Julius Dreschfeld. Midwifery and Diseases Peculiar to Women: Dr. John Baptiste Potter, Dr. Charles James Cullingworth, Dr. Peter Horrocks, Dr. John Phillips, and Dr. Robert Boxall. Surgical Anatomy and Principles and Practice of Surgery: Mr. John Langton and Mr. John Neville Colley Davies-Colley. Public Health: Part I., Dr. Thomas Stevenson: Part II., Dr. William Pasteur. Examiners for the Murchison Scholarship: Dr. Thomas Whipham and Dr. William Henry Allchin.

QUARTERLY REPORT OF THE RED CROSS.

THIS report has just missed being a very interesting document. The three months it covers include the Græco-Turkish war, in which both belligerents enjoyed the services of an ambulance furnished by Germany, an ambulance furnished by Russia (four ambulances, that is to say), and the Greeks alone had a Danish ambulance all to themselves, besides receiving generous gifts in kind from Rome, Budapest, Lisbon, Geneva, and other sympathising centres—all this, moreover (we are still speaking of the Greeks), in addition to a large outflow of compatriot charity. As for the Turks, their "Red Crescent Society," having its headquarters at Constantinople, gave them no assistance for the reasons that the outbreak of hostilities took it by surprise, that at the same moment it lost its president by death, and that the surviving members of its committee were not in a position to take the field. It did nothing, in fact, as long as the struggle lasted, and intervened only when the armistice was agreed to on May 27th, when it took part in the work of embarking and convoying the wounded by sea. The interest of Red Cross activity centres, accordingly, in the German, Russian, and Danish ambulances, but, unfortunately, none of them had prepared their reports when the "Chronique Trimestrielle de la Croix-Rouge," now before us, was in course of publication, so, as we have hinted, this document is unable to satisfy the curiosity of an eager world. Not that it is devoid of an interest of its own. The International Committee, which has its headquarters at Geneva—whose action, we need hardly say, is quite independent of the national committees (German, Russian, Danish)—performed a duty as salutary as it was unique, the duty, to wit, at the first warlike rumour, of ascertaining from the belligerents their probable clinical and sanitary wants with a view to obtaining from the neutral societies of the Red Cross such assistance as might be required. Having obtained the requisite information, the International Committee then addressed the neutral societies *en masse*, with the response already known, while it further declared to the belligerents that it was ready to organise in a suitable locality a central dépôt for the receipt, the custody, and the distribution of the offerings (medical, pharmaceutical, alimentary, and sumptuary) contributed by sympathising outsiders. This undertaking on the part of the International Committee, however, failed of effect, like many other equally well-inspired proposals in that unfortunate war, and it had

no opportunity of repeating in 1897 the admirable service it vouchsafed to the belligerents in the campaigns of 1870, 1877, and 1885. Another point in which the usefulness of the International Committee made itself felt was its willingness to act as intermediary between the belligerents, accusing each other reciprocally of non-observance of the articles of the Geneva Convention. In so acting the International Committee does not, of course, arrogate to itself the power of returning a verdict; it simply collects from the allegations of the disputant parties the materials on which the civilised world can pronounce an opinion on the conduct of either, so as to withhold from the offender that moral support which is year by year counting for more in the comity of nations. For instance, a protest was lodged by the Greeks against the Turks setting forth that the latter shelled the hospital at Arta. This the Turks denied, and the "Bulletin" of the International Committee became the medium of the representations *pro* and *contra*, providing the world at first hand with the facts of the case and enabling it to judge accordingly. From this *rôle*, rather thrust upon it than assumed, the International Committee is in a fair way of becoming a "Bureau de Consultation," if not a court of appeal, contributing thus to familiarise the world with that method of arbitration to which Christendom so fondly looks for the non-military settlement of difficulties. Indeed, the questions that from time to time come before it are such as to form a preparatory discipline for the "arbitration school." For example, "What use can a civil ambulance, organised by a neutral power and placed at the service of a belligerent, make of its own national flag?" Even more important is another question of the kind: "Has the Red Cross Society of a belligerent power, or the belligerent himself, the right to refuse the coöperation of an ambulance organised by the Red Cross of a neutral State?" Once more: "Is it lawful for a society of assistance to the wounded, recognised by the International Committee, to make use of another emblem than a red cross on a white ground—for example, a red crescent?" These are difficult questions, pressing for solution, and the facilities offered in this direction by the International Committee, with its experience of similar problems, cannot but be put in evidence at the Sixth International Congress of Red Cross Societies throughout the World which will meet on Sept. 20th at Vienna.

METROPOLITAN ASYLUMS BOARD STATISTICS.

I.—INFECTIOUS DISEASES.

THE Statistical Committee of the Metropolitan Asylums Board have just issued their eleventh annual report. The work of this Board and its value from a public health point of view increases from year to year, and the statistics contained in the report just issued show the same excellence of arrangement and method which has been conspicuous in its predecessors. During the year 1896 no fewer than 22 463 cases were received into the Board's hospitals for infectious diseases—a number considerably larger than that recorded in any year since 1871, when these hospitals were first opened. The nearest approach to this number occurred in 1893, when 21,050 cases were admitted, including 2376 small-pox patients. The main value of these isolation hospitals, from a sanitary point of view, arises from the possibility they provide for turning the notification of infectious diseases to practical account. The report just issued gives some valuable and interesting figures bearing on the connexion between the notification and isolation of infectious diseases in London in recent years. The year 1890 was the first in which compulsory notification was in force in London, and the proportion of admissions to the Board's hospitals to the total number of legally admissible cases was in that year 33 6 per cent. In the five following years the percentage of admissions to admissible cases rose, with some fluctuations, to 52·2 in 1894 and 50·3 in 1895. During last year 42 876 admissible cases were notified, of which 22 463, or 52·4 per cent., were actually received into the Board's hospitals. It is interesting to note that the proportion of admitted to admissible cases of the several diseases varied very widely; the proportion was 82 per cent. of small-pox cases, 63 per cent. of scarlet fever cases, 39 per cent. of cases of diphtheria and membranous croup, 27 per cent. of enteric fever cases, and 33 per cent. of typhus fever cases. It should be remembered, however, that the numbers of notified cases of these different diseases are probably of varying degrees of accuracy, which would affect to some extent the above-quoted percentages. It is, moreover, pointed out in the report that the proportion of admitted to admissible cases is at times considerably affected by the amount of hospital accommodation available. For instance, throughout last year the admitted cases of scarlet fever averaged 63 per cent. of the notified cases of that disease. It appears, however, that in the first five months of the year, in which the managers were able to accommodate all applicants, more than 70 per cent. of the notified cases were admitted, whereas later in the year, when the hospital accommodation fell short, the proportion of admitted to notified cases gradually declined to 57 per cent. in October, when the pressure for admission was greatest. This evidence of the need for increased hospital accommodation will probably not be lost sight of by the managers and by the ratepayers, on whom the heavy cost of this hospital accommodation falls. The report tells us that the completion of the works now in hand will place the managers in possession of nearly 6000 beds for infectious diseases other than small-pox.

During 1896 the number of patients admitted into the ten fever hospitals in use by the Board was 22,273, as compared with 16,847 in 1895, 16,667 in 1894, 18,674 in 1893, and 16 276 in 1892. Between 1891 and 1887 the numbers ranged between 5152 and 8334, and prior to 1887 the highest number in any year was 2867 in 1882. These figures show the remarkable extension of the work entrusted to the Metropolitan Asylums Board since the notification of infectious diseases became compulsory in London in 1890.

The cases of scarlet fever admitted to these hospitals last year were 15,982, and considerably exceeded the admissions in any previous year. The nearest approach to this number occurred in 1893, when 14,548 cases were admitted. The number of deaths from this disease in the Metropolitan Asylum Hospitals during the year was 666, equal to a proportional case mortality of 4·3 per cent., showing a further decline from the rates in the four preceding years, which had steadily decreased from 7·3 to 5·5 per cent. The marked and steady decline of the proportional case mortality of scarlet fever cases in the board's hospitals calls for further notice. In the ten years 1871–80 the case mortality was equal to 12 1 per cent., in 1881–90 it fell to 10·1 per cent., and in the six years 1891–96 it averaged only 6·0 per cent. It would be interesting to know what proportion of this decrease of mortality is due to modification of the type of the disease, how much to the treatment in the hospitals of an increased proportion of mild cases, and how much to more successful hospital treatment of the cases admitted. The report contains a valuable table showing the relation of age and sex to scarlet fever mortality, based upon 66,492 cases treated in these hospitals during the five years 1892–96. The most noticeable feature in these statistics is the fact that the mortality decreases with the age of the patient from 27 per cent. in the first year of life to 1·2 per cent. in the age-period 25–30; the mean percentage of case-mortality is 13·3 under five years of age, and averages 2·5 above the age of five years.

Cases of diphtheria were first treated in the Board's hospitals in 1888, when 99 were admitted. The number of cases admitted has steadily increased in each succeeding year, and rose to 4508 in 1896, which were equal to 39 per cent. of the cases notified. The deaths from this disease in the hospitals during the year were 948 and were equal to a case mortality of 21·2 per cent., showing a further decline of 1·7 per cent. from the percentage in the preceding year, when the antitoxin treatment was first generally adopted in these hospitals. It should be noted, however, that during the seven years 1888–94, prior to the trial of antitoxin, the case mortality of diphtheria in these hospitals steadily declined from 59·4 per cent. in 1888 to 29·3 in 1894. The percentages in 1895 and 1896, when the antitoxin treatment became general, further fell to 22·9 and 21·2 The report now under notice contains full and elaborate statistics bearing upon the result of the antitoxin treatment of diphtheria in these hospitals upon the case mortality, which call for careful consideration and separate notice. It may be noted that whereas 71 per cent. of the deaths from scarlet fever in London last year were recorded in the Board's hospitals, only 35 per cent. of the total deaths from diphtheria were recorded therein. It is,

however, satisfactory to find that the proportion of diphtheria cases in London isolated and treated in hospital has constantly increased in recent years. If, moreover, it be safe to assume that the number of notified cases of diphtheria in London approximates closely to the actual number of occurring cases, it would appear that the case mortality last year outside the Board's hospitals did not materially differ from the case mortality in those hospitals.

During 1896 the number of cases of enteric fever treated in the Board's hospitals was 600, and fewer by 61 than the number in the preceding year. The deaths from this disease during the year were 96, showing a case mortality of 15·8 per cent, against 20·5, 18·1, and 18·2 in the three preceding years. Case mortality from enteric fever in these hospitals has declined from 19·5 in the ten years 1871-80 to 16·4 in the ten years 1887-96, but this decline is small compared with the decrease in the case mortality of scarlet fever and diphtheria. The number of cases of enteric fever treated in these hospitals last year was equal to 27·0 per cent. of the notified cases, or if the cases handed over for treatment by the managers to the general hospitals be included the proportion is raised to 30·0 per cent. The 96 deaths from this disease in the Board's hospitals were equal to but 16·2 per cent. of the total deaths assigned to this cause during the year in London. The age incidence of enteric fever shows a marked contrast to that of scarlet fever and diphtheria. The number of deaths referred to enteric fever under the age of five years is small, and their case-mortality (based upon 10,484 cases at all ages in the Board's hospitals in the years 1871-96) is 13·2 per cent., but at subsequent age-periods the mortality increases steadily and constantly from 8·9 per cent. at the ages of from five to ten years, to 35·4 per cent. above the age of fifty years.

Only nine cases of typhus fever were admitted to these hospitals in 1896, resulting in two deaths. Of the 97 cases admitted in the nine years 1888-96, 18 proved fatal, showing a case mortality of 18·6 per cent., while the mean mortality during the whole period 1871-96 averaged 20·7 per cent. It appears, therefore, that the case mortality of typhus fever in hospital, as of the other infectious diseases, has declined in recent years.

Not more than 190 cases of small-pox were admitted to the Board's hospitals during last year, of which only 9 proved fatal, equal to a case mortality of but 4·7 per cent. The small-pox cases admitted in the three preceding years were 2376, 1117, and 941 respectively. It is worthy of note that these 9 fatal cases of small-pox were the only deaths from small-pox recorded in London during the whole year.

Before concluding this notice of the Metropolitan Asylums Board's statistics, so far as they relate to infectious diseases, it may be well to refer to some interesting figures given in the report relating to illness of members of the staff in the fever and small-pox hospitals. During last year there were 3542 persons employed at the fever hospitals, of whom 176, or 5·6 per cent., were attacked by fever or diphtheria, and 3 died; while of the 250 persons employed on the small-pox hospital ships, not one suffered from small-pox. The managers state that the experience of each succeeding year only confirms them in their belief that nurses and other members of a hospital staff may be brought with almost absolute impunity into contact with small-pox provided they are protected by efficient vaccination.

We must postpone to another occasion a notice of the valuable statistics relating to the more than 6000 imbecile patients under treatment in the asylums under the management of the Metropolitan Asylums Board.

THE HEALTH OF THE TROOPS IN INDIA.

A PARLIAMENTARY paper has been published, as we briefly announced last week, setting forth some "Further Correspondence regarding the Measures to be Adopted for Checking the Spread of Venereal Disease among the British Troops in India." As the subject is one of much interest and importance we may give a brief analysis of the contents of this Parliamentary paper, with such comments as occur to us. The military letter from the Government of India states that after having fully considered the despatch of the Secretary of State for India, with which our readers are already acquainted, together with the report of the Earl of Onslow's Committee, the memorandum of the Army Sanitary Commission dealing generally with the measures by which it is considered possible to restrict the spread of venereal disease among soldiers in India, and the representations of the Royal College of Physicians of London and the Royal College of Surgeons of England, they have drawn up and submitted the accompanying draft rules proposed to be issued under the Cantonments Act of 1889. These rules, amending and enlarging that Act, are framed on the lines of, and in accordance with, the principles embodied in the Secretary of State's despatch. Although they are stated to be drafted with the least degree of stringency necessary to enable cantonment authorities to deal with the evils against which they have to contend, it is considered that the repeal of Act V. of 1895 is necessary in order to protect medical and other officers in the performance of duties which the new rules will impose upon them. The Act of 1895 prohibiting examinations and removing the then existing safeguards against the spread of venereal disease was, it will be remembered, the result of orders from this country. Exception is taken to the suggestion of the Army Sanitary Commission with regard to the employment of female hospital assistants for the examination of diseased women, on the ground that it is, under the circumstances, an unnecessary, and in many respects an unsuitable, provision. The difficulties in the way of giving effect to this suggestion of the Army Sanitary Commission and the practical objections to it are well and very pertinently indicated. The desirability of raising the moral and physical condition of the army and of warning young soldiers on their arrival in India of the dangers to which they are exposed are pointedly recognised, and the steps which have already been, and will hereafter be, taken in this direction are adverted to. With regard to the inspection of soldiers, the imposition of penal stoppages for admission to hospital, and the punishment of soldiers concealing venereal disease, the Commander-in-Chief makes some propositions which are embodied in a letter from the Adjutant-General in India accompanying the despatch. Speaking generally, we consider that the proposals emanating from the Government of India are wise, judicious, extremely moderate, and under the circumstances absolutely necessary; and we are glad to notice that the Secretary of State has telegraphed his authority to the Viceroy to proceed in the manner proposed. We feel it right, however, to advert to certain points in regard to which we either do not agree or are not without misgiving. In the first place, while admitting that there may be some force in the objections raised in India against the employment of female hospital assistants under the direction of medical officers in the examination and treatment of women, we nevertheless concur with the dissent expressed by Lord George Hamilton in his despatch, for we regard it, on the contrary, as a necessary and suitable provision. The employment of females for this purpose to a very large extent deprives of any force the objection which is so strongly urged by the opponents to all legislative measures. Notwithstanding the difficulties that may exist in carrying it out at present on any extensive scale it should be given a trial wherever practicable. In the next place, as regards penal stoppages being imposed upon a soldier for every day spent in hospital on account of venereal disease, and a change being introduced into the Army Act and regulations so that this may be made universally applicable to the British Army, we entertain grave doubts. It may be fairly urged, of course, that it is logically and morally wrong to apply the same rule to the soldier undergoing treatment for a self-inflicted disease or a complaint caused by his own misconduct and to the soldier suffering from a disease or disability which has been contracted in the execution of his duty and over the origin of which he had no control. But in that case whatever loss of pay is forfeited should not go to the State, but to the benefit of the corps to which the soldier belongs and to those who had to do his duty whilst in hospital. We think it probable that soldiers would recognise the justice of the view that a difference should be made between the daily pay of a soldier in hospital for an attack of pneumonia, rheumatic fever, typhoid fever, or ague, and that of one suffering from venereal disease; but the latter should, even then, not forfeit all his daily pay, and whatever loss he incurred in this respect should not be for the benefit of

the State. The danger of imposing any system of fines or penal stoppages is lest it should lead to concealment of disease. Nor should the possible effect on recruiting of any unpopular measure be lost sight of. The subject will, no doubt, be carefully considered, however, by the Secretary of State for War.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on July 29th, the President, Sir WILLIAM MACCORMAC, Bart., being in the chair.

On the recommendation of the Library Committee, Mr. Victor Gustave Plarr, B.A. Oxon., and late librarian at King's College, London, was appointed librarian. A vote of thanks was given to Mr. C. R. Hewitt, assistant in the library, together with an honorarium, in recognition of his valuable services in the library since the death of Mr. James B. Bailey; Mr. Hewitt's salary was also increased.

It was resolved that the museum and library should be closed from Aug. 28th to Oct. 1st.

The following recommendations of the Committee of Management of the Conjoint Examining Board were adopted:—

1. That the following institutions be added to the list of recognised places of instruction in chemistry, physics, practical chemistry, and biology:—*(a)* Battersea Polytechnic Institute. *(b)* Cheltenham College (without biology). *(c)* Middlesbrough High School (without biology). *(d)* Northern Polytechnic Institute.
2. That the following hospitals be added to the list of fever hospitals recognised by the Board:—*(a)* Bristol Corporation Fever Hospital. *(b)* Manchester Corporation Fever Hospital.
3. That the following asylums be added to the list of lunatic asylums recognised by the Board:—*(a)* City and County Asylum, Fishponds, Bristol. *(b)* Manchester Royal Asylum, Cheadle.
4. That the Victoria Hospital for Children, Chelsea, be recognised as a place of study during the fifth year of the curriculum.
5. That the Royal Westminster Ophthalmic Hospital be added to the list of ophthalmic hospitals recognised by the Board.

Mr. J. N. C. Davies-Colley and Mr. C. H. Golding-Bird were elected members of the Court of Examiners.

Sir William MacCormac was elected a member of the Committee of Management in the vacancy occasioned by the resignation of Mr. Christopher Heath.

A letter was read from Mr. G. F. Oldham communicating the following resolution adopted at a meeting of members of the medical profession in Norwich, held on the 17th inst., viz.:—

"That this meeting, while acknowledging with thanks the reply of the Royal College of Surgeons to the Norwich memorial, desires to express the opinion that steps should be taken so to amend Section XVI. of the by-laws as to enable the Council to prevent its Fellows, Members, or Licentiates accepting positions derogatory to the honour and best interests of the profession."

In reply to a letter from the Rev. J. J. H. S. Pennington stating that he still required £1100 for the completion of the St. Clement Danes Parish House and asking for a further contribution, the Council voted 10 guineas.

The following resolution, moved by Mr. J. Tweedy, was carried: "That the printed copies of the minutes of the Council be considered the property of the College, and that regulations be framed with a view to preventing unauthorised persons from obtaining them."

A letter was read from Lord Salisbury announcing that an International Conference on Leprosy would shortly be held in Berlin.

A recommendation was received from the Laboratories Committee that the director should be authorised to issue an official certificate of the strength of diphtheria antitoxins tested in the laboratories.

CHILDREN'S CONVALESCENT HOME, WEST KIRBY.—At the instigation of Mr. W. Adamson, president of the Liverpool Royal Southern Hospital, a few local gentlemen have subscribed the sum of £600 for the purpose of endowing a free bed at the Convalescent Home, West Kirby, for the use of patients from the Royal Southern Hospital, which, by Royal permission, has been called "Queen Victoria Cot." As the Liverpool Royal Infirmary is already in the possession of a cot endowed by the liberality of Mr. A. K. Cannington, it is hoped by the committee that similar endowments will be made by the benevolent on behalf of the other city hospitals, especially the Children's Infirmary.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Liverpool Port District.—The formation of the Port Sanitary District of Manchester, owing to the existence of the Manchester Ship Canal, has thrown upon the sanitary authority of that newly-created district the responsibility of dealing with ship-borne infection on Manchester-bound vessels, and has dispensed with the necessity for the proposed arrangement with the Liverpool Port Sanitary Authority for dealing with certain infectious diseases on board vessels passing through the waters of the Liverpool Port Sanitary Authority. There were no less than 3516 vessels examined by the Liverpool Port Sanitary inspectors during 1896, and of this number 1996 had some sanitary defect or other. Seventy-three cases of infectious disease were landed from shipping during the year, and among cases classed as non-infectious we notice fifteen cases of beri-beri. A marked diminution in the number of emigrants leaving Liverpool took place during 1896, the numbers amounting to only 98,279, as against 117,196 in 1895. Dr. E. W. Hope thinks it probable that a large number of emigrants pass now direct from the Continent instead of *viâ* Liverpool as formerly. Among the English emigrants who left Liverpool during 1896, 31,571 went to the United States and 12,768 to Canada.

Birmingham Urban District.—For the first time in the history of the city of Birmingham the population has been estimated at over half a million, while the average number of persons per acre has reached 39·5, as against 36·4 in 1887. Dr. Alfred Hill does not speak enthusiastically as to the mortality statistics for the past year, the general death-rate (20·4 per 1000) being higher than in recent years, and the position of Birmingham amongst the other large towns being less creditable than heretofore. As Dr. Hill somewhat pathetically remarks: "It is anything but reassuring to find that the greater part of the increase in last year's mortality was caused by the serious prevalence of zymotic diseases, all of which (except small-pox) were much more fatal than in the five previous years." When the death-rate of the several wards of the city is worked out it is found that there is much inequality, the rate for St. Mary's Ward being 28·9, that for Balsall Heath 15·4, or, taking the nine worst wards, it is found that they yield a death-rate of 24·5, as against one of 17·7 in the better wards. A further analysis shows that the more prominent causes of death were higher in the nine worst wards (save in respect of cancer and diphtheria), while diarrhœa and enteric fever were nearly twice as common in the bad wards as in the good ones. Dr. Hill, in discussing the causes of these high mortality rates, expresses the opinion that the want of ventilation is the most important feature with which the sanitary authority has to deal, and he provides a table which appears to demonstrate very clearly the excellent effects of improved houses and of better ventilation. The figures are so remarkable that we give them here:—

—	Death-rate, 1873-1875.	Death-rate, 1879-1881.
Lower Priory	62·5	21·9
Rope-walk	42·0	24·9
Bailey-street	97·0	25·6
Potter-street	44·0	28·8
Russell-street	55·0	19·1
Princip-street	46·0	13·2
Aston-road	40·0	19·3
Tanter-street	47·0	22·0

There were 14 cases of small-pox in Birmingham during 1896, the three first cases having been introduced from Gloucester, facts which show, as Dr. Hill observes, the folly of allowing communities to please themselves as to whether they shall enforce the vaccination laws or not. Measles caused 310 deaths in Birmingham in 1896, and Dr. Hill remarks that if any notable reduction is to be effected in the death-rate from this disease, much more definite action will have to be

taken than is the case at present. He considers notification to be as yet impracticable in Birmingham, and he suggests that the sanitary officers should obtain from the School Board officials the names of all children who are absent owing to measles; and that printed instructions should be forwarded to the invaded houses. Dr. Hill proposes that exactly the same lines of action should be taken in the matter of whooping-cough. The necessity for the control of these two latter diseases is shown by the fact that during the decade 1886-95 the average annual number of deaths from measles was 237, and from whooping cough 257, while scarlet fever and diphtheria claimed but 94 and 69 respectively. The fall in the fatality rate of scarlet fever in Birmingham during the last two decades is very clearly shown in the following table in the report:—

—	Cases.	Deaths.	Case mortality.
1875-78	535	78	14·6 per cent.
1879-83	1945	207	10·6 .. ..
1884-90	6201	383	6·2 .. ..
1891-95	10,551	473	4·4 .. ..

And it may be noted that the reduced fatality-rates have gone side by side with the increased hospital isolation of the disease. The behaviour of diphtheria in Birmingham is full of interest, and there seems to be no adequate explanation of the increased incidence during the last two years. In 1873 the death-rate from this disease was 0·31 per 1000, and this rate gradually diminished until in 1893 it reached 0·09 per 1000. Towards the end of 1894 a rise commenced which reached in 1896 no less than 0·48 per 1000. Dr. Hill can furnish no sufficient explanation of this rise, and it seems clear from the distribution of the disease that it is not dependent upon grave insanitary conditions. The rise is a most puzzling one and well merits the close study which it will doubtless receive at the hands of Dr. Hill.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6662 births and 4827 deaths were registered during the week ending July 31st. The annual rate of mortality in these towns, which had increased from 14·7 to 19·3 per 1000 in the four preceding weeks, further rose last week to 22·9. In London the rate was 23·6 per 1000, while it averaged 22·4 in the thirty-two provincial towns. The lowest rates in these towns were 9·9 in Croydon, 10·3 in Huddersfield and in Halifax, 12·2 in Oldham, and 13·5 in Cardiff; the highest rates were 28·0 in Portsmouth, 28·7 in Wolverhampton, 31·7 in Preston, 32·0 in Sheffield, and 32·6 in Liverpool. The 4827 deaths included 1337 which were referred to the principal zymotic diseases, against 572 and 904 in the two preceding weeks; of these, 994 resulted from diarrhœa, 143 from measles, 87 from whooping-cough, 54 from diphtheria, 37 from scarlet fever, 21 from "fever" (principally enteric), and 1 from small-pox. No death from any of these diseases was recorded last week in Huddersfield; in the other towns they caused the lowest death-rates in Cardiff, Halifax, and Derby; and the highest rates in Sheffield, Wolverhampton, Liverpool, Preston, and Portsmouth. The greatest mortality from measles occurred in Manchester, Salford, Burnley, and Preston; from whooping-cough in West Ham, Plymouth, Wolverhampton, Burnley, and Gateshead; and from diarrhœa in Portsmouth, Wolverhampton, Nottingham, Birkenhead, Liverpool, and Sheffield. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 54 deaths from diphtheria included 41 in London, 2 in West Ham, and 2 in Liverpool. One fatal case of small-pox was registered in London, but not one in any other of the thirty-three large towns, and there was one small-pox patient under treatment during last week in the Metropolitan Asylum Hospitals. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital, which had increased from 2380 to 2976 at the end of the thirteen preceding weeks, had further risen to 3106 on Saturday last, July 31st; 360 new cases were admitted during the week, against 349, 381, and 396 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 138 and 158 in the two preceding weeks, declined again to 146 last week, and were 30 below the corrected average. The causes of 60, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bradford, Leeds, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Bristol, Birmingham, Liverpool, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the three preceding weeks from 17·7 to 19·5 per 1000, declined again to 18·2 during the week ending July 31st, and was 4·7 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·5 in Aberdeen and 14·7 in Paisley to 20·7 in Dundee and 21·4 in Leith. The 542 deaths in these towns included 51 from diarrhœa, 22 from whooping-cough, 5 from scarlet fever, 5 from measles, 3 from diphtheria, and 2 from "fever." In all, 89 deaths resulted from these principal zymotic diseases, against 80 and 100 in the two preceding weeks. These 89 deaths were equal to an annual rate of 3·0 per 1000, which was 3·5 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had increased from 20 to 35 in the four preceding weeks, further rose to 51 last week, of which 29 occurred in Glasgow and 6 in Greenock. The 22 deaths referred to whooping-cough showed a decline of 15 from the number recorded in the preceding week, and included 14 in Glasgow and 4 in Leith. The 5 fatal cases of scarlet fever corresponded with the number in the preceding week, and included 4 in Edinburgh. The deaths from measles, which had been 12 and 15 in the two preceding weeks, declined again to 5 last week, of which 4 occurred in Leith. The 3 fatal cases of diphtheria included 2 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 68 and 87 in the two preceding weeks, declined to 66 last week, but slightly exceeded the number in the corresponding period of last year. The causes of 30, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·2 and 23·3 per 1000 in the two preceding weeks, further declined to 22·8 during the week ending July 31st. During the past four weeks of the current quarter the death-rate in the city has averaged 23·0 per 1000, the rate during the same period being 18·8 in London and 19·6 in Edinburgh. The 153 deaths registered in Dublin during the week under notice showed a decline of 3 from the number in the preceding week, and included 16 which were referred to the principal zymotic diseases, against 11 and 20 in the two preceding weeks; of these, 8 resulted from diarrhœa, 3 from diphtheria, 1 from scarlet fever, 1 from whooping-cough, and 1 from "fever." These 14 deaths were equal to an annual rate of 2·1 per 1000, the zymotic death-rate during the same period being 6·9 in London and 1·6 in Edinburgh. The fatal cases of diarrhœa, which had been 2 and 7 in the two preceding weeks, further rose to 8 last week. The 3 deaths referred to diphtheria corresponded with the number registered in the preceding week, while the mortality from scarlet fever and from whooping-cough showed a decline. The 153 deaths in Dublin last week included 42 of infants under one year of age, and 31 of persons aged upwards of sixty years; the deaths of infants showed a further increase upon those recorded in recent weeks, while those of elderly persons showed a decline. Seven inquest cases and 4 deaths from violence were registered; and 49, or nearly a third, of the deaths occurred in public institutions. The causes of 12, or nearly 8 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR MICHAEL F. MACNAMARA, F.R.C.S.Irel., retires from the service, receiving a gratuity. The undermentioned Surgeon-Lieutenants to be Surgeon-Captains:—Percy Evans, M.B., Arthur E. Milner, Claude K. Morgan, M.B., John P. Silver, M.B., Herbert W. Vaughan-Williams, M.B., John M. Buist, M.B., James Walker, M.B., Frank Dove, George St. Clair Thom, M.B., and Stephen W. Sweetnam.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain William Alfred Dingle, M.D., 2nd Tower Hamlets Royal Engineers (Volunteers), to be Surgeon-Captain.

VOLUNTEER CORPS.

Artillery: 1st Monmouthshire: Surgeon-Lieutenant W. E James to be Surgeon-Captain. *Rifle:* 2nd Volunteer Battalion the East Yorkshire Regiment: Surgeon-Major W. Stephenson to be Surgeon-Lieutenant-Colonel. 2nd Volunteer Battalion the Duke of Edinburgh's (Wiltshire Regiment): Surgeon-Lieutenant G. R. Swinhoe to be Surgeon-Captain.

ARMY MEDICAL SCHOOL, NETLEY.

The seventy-fourth session of the Army Medical School, Netley, was brought to a close on July 30th, when the prizes were distributed and an address was given by Major-General Sir William F. Butler, K.C.B., Commanding the South-Eastern District. The following is a list of Surgeons on probation who were successful both at the London and Netley examination. The prizes are awarded for marks gained in the special subjects taught at the Army Medical School, and the final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley.

ARMY MEDICAL SERVICE.

	Combined marks.		Combined marks.
†S. L. Cummins	4671	J. Poe	3942
J. McArdle	4456	H. L. W. Norrington ...	3928
‡C. H. Hopkins	4247	H. G. F. Stallard	3806
L. J. C. Hearn	4227	R. D. Jephson	3654
P. Mackessack	4172	J. Crean	3577
J. McD. McCarthy ..	4147	A. W. N. Bowen	3413
E. Brodribb	4085		

† Gained the de Chaumont Prize in Hygiene.
‡ Gained the second Montefiore Prize.

INDIAN MEDICAL SERVICE.

	Combined marks.		Combined marks.
*J. G. P. Murray	5644	A. Fenton	5093
†S. Anderson	5428	J. A. Dredge	5006
‡F. H. G. Hutchinson ...	5390	R. W. Knox	4885
§J. L. Majoribanks	5208		

* Gained the Herbert Prize of £20, the Martin Memorial Medal, and the Pathology Prize presented by Sir Joseph Fayrer, Bart., K.C.S.I.
† Gained the Maclean Prize for Clinical and Ward Work.
‡ Gained the Parkes' Memorial Medal.
§ Gained the first Montefiore Prize of 20 guineas and Bronze Medal.

Owing to the extraordinary pressure on our space by reason of the publication of our special Russian supplement we are compelled to hold over the report of the proceedings and Sir William F. Butler's address till our next issue.

THE TOCHI EXPEDITION.

The *Army and Navy Gazette* says: "The medical arrangements of the Tochi expedition are: Principal Medical Officer, Surgeon-Colonel Carew, D.S.O.; Argyll and Sutherland Highlanders, Surgeon-Captain Swan; Rifle Brigade, Surgeon-Major O'Donnell. No. 2 British Field Hospital: Surgeon-Majors Townsend and Skinner, and Surgeon-Captains Mansby and Johnson. Sections A and B, No. 3 British Field Hospital: Surgeon-Major Kelly and Surgeon-Captain McDowell; 14th Sikhs, Surgeon-Captain Irvine, I.M.S.; 25th Bengal Infantry, Surgeon-Captain Drake-Brockman; 33rd Bengal Infantry, Surgeon-Captain Evans; 1st Sikh Infantry, Surgeon-Captain Seton; 1st Punjab Infantry, Surgeon-Captain Vizzard. No. 28 Native Field Hospital: Surgeon-Lieutenant Colonel Mawson, Surgeon-Major Briton, and Surgeon-Captains Gee and Mulvaney. No. 29 Native Field Hospital: Surgeon-Lieutenant-Colonel Simmonds, Surgeon-Captain McLeod, and Surgeon-Lieutenants Morgan and James. No. 38 Native Field Hospital: Surgeon-Major Hudson, Surgeon-Captain Elliott, and Surgeon-Lieutenants Scott Moncreiff and Morehead. Native General Hospital, Bannu: Surgeon-Major Mukerjee, Surgeon-Captain Rogers, and Surgeon-Lieutenant Dee."

THE RELIEF OF CHAKDARA.

The relief of Chakdara seems to have been effected by a well-designed plan executed with skill, and the enemy was completely surprised. The losses of the Chakdara garrison, and those of the force that advanced to its relief were relatively small. A large native force provided with scaling ladders, which were preparing to attack Chakdara, had to retire hastily. Malakand is reported to be quiet. Whether the tribesmen are determined on further resistance has yet to be seen, but it will be the object of the punitive British force to so completely dominate them as to put an end to their future mischief—not an easy task under the circumstances and the difficult conditions of the country. Meanwhile there will be a good deal of occupation for the medical officers in organising their hospitals, in attending to the sick and wounded, and arranging for their transport to the base.

Surgeon-Captain W. H. Horrocks, M.B., A.M.S., has been appointed Assistant Professor of Military Hygiene at the Army Medical School, Netley, vice Surgeon-Major Firth, F.R.C.S. Eng., whose period of service will expire on Sept. 1st.

Correspondence.

"Audi alteram partem."

AN INVITATION FROM HAMBURG.

To the Editors of THE LANCET.

SIRS,—On behalf of the Hamburg Committee in connexion with the Twelfth International Medical Congress I venture to express the hope that many of our English colleagues will pass through Hamburg going to Scandinavia on the way to Moscow.

In addition to the General Hospital (Neues Allgemeines Krankenhaus) Hamburg possesses various other hospitals, medical institutions, and places of interest, all of which we shall be most happy to show to our visitors.

I am, Sirs, yours faithfully,

Hamburg, July 31st. DR. KÜMMELL.

"HOSPITAL ABUSE."

To the Editors of THE LANCET.

SIRS,—I can understand that the self-sufficient gentleman who called upon some of us here respecting the subject of "Hospital Abuse" should have resented being told to mind his own business and allow us to mind ours; but it is inconceivable that THE LANCET, which owes something to its position as the leading English medical journal, should have allowed such a spiteful misrepresentation of the profession in this city as that which is published as the report of the "Special Commissioner" on Hospital Abuse in Birmingham to appear in its columns. It is a cowardly and cruel libel to say that the profession there is so saturated with the commercial spirit and so engrossed with making money that it cares nothing for these questions, and the Editors of THE LANCET must have been suffering from the effects of the dog-days when they allowed such a monstrous accusation to pass their censorship. What is the charge which this precious Commissioner makes? It is that Birmingham having taken the lead in the question of hospital reform, has not been able to attain to any practical result. But where has such a result been obtained under conditions anywhere comparable to ours? And are we to be fairly exposed to the taunt of being a money-grubbing, disorganised profession because difficulties which have been nowhere overcome have been to us so far insuperable, or because many of us think that if they are to be overcome it will be by tact, patience, and the growth of the conviction that the medical profession is only asking what is right and reasonable, or that this consummation will not be promoted by the interference of outsiders whose acquaintance with our local

conditions must be very imperfect? It is to be hoped that you will in future conduct your campaign without indulging your "Commissioner" in coarse abuse of the profession here or elsewhere.

I am, Sirs, yours truly,

R. SAUNDBY, M.D. Edin., F.R.C.P. Lond.

Birmingham, Aug. 1st, 1897.

THE CONGRESS IN MOSCOW: RUSSIAN PASSPORTS.

To the Editors of THE LANCET.

SIRS,—Will you allow me to correct one small mis-statement in your "hints" to intending visitors to Moscow, printed in THE LANCET of July 24th? You say: "If he [the traveller] is staying in a private house he must himself take his passport to the nearest police office." This is not quite the case. The traveller staying in a private house has practically no responsibility with regard to his passport. It is the duty of the *dvornik* or porter attached by law to every house to obtain the traveller's passport and take it to the police. It is also the *dvornik's* duty to obtain the necessary permission of the authorities to enable the traveller to leave the country. In both cases the traveller himself remains passive. If his passport is in order, that is to say, if it has been *visé* by a Russian consul in London or elsewhere, he has no further trouble; the system works automatically. May I also add to your first hint, that "a passport is absolutely necessary," that a passport itself is useless unless it has been *visé*, as just stated, at a Russian consulate.

I am, Sirs, yours faithfully,

St. Petersburg, July 17th (29th), 1897. FRANK G. CLEMOW.

CULLINGWORTH FUND.

To the Editors of THE LANCET.

SIRS,—Will you allow us to make a brief statement in your columns as to the Cullingworth Fund, which is now finally closed? It was hoped that we should be able to defer sending out the balance-sheet until the litigation had been brought to a conclusion, but Miss Beatty has applied for permission to appeal to the House of Lords *in formâ pauperis*, and though this application has been refused it is still open to her to proceed with the suit in the ordinary way. Under the circumstances we have thought it better to issue the balance-sheet without further delay. The amount subscribed is £972, a sum which will, it is hoped, fully cover Dr. Cullingworth's legal expenses. The incidental expenses would have been much greater had it not been for the generous coöperation of yourselves and the editor of the *British Medical Journal*, which we desire cordially to acknowledge.—We remain, Sirs, yours faithfully,

T. D. ACLAND,
B. PITTS, } Hon. Secs.

TREASURER'S STATEMENT.

Receipts as per published lists	£ s. d.	Paid to Dr. Cullingworth	£ s. d.
	£972 0 0		£959 14 6
		Printing, &c.	6 0 6
		Clerical assistance	2 10 0
		Postage, &c.	3 10 0
		Messengers and telegrams	0 5 0
	£972 0 0		£972 0 0

July 30th, 1897. W. ROBERTS, Hon. Treasurer.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Antitetanus Serum as a Preventive.

AT the last meeting of the Academy of Medicine M. Nocard, continuing the subject introduced by him some eight days previously, brought forward evidence to prove that a small dose of antitetanus serum was enough to immunise a horse against a fatal dose of tetanus toxin. The use of antitetanus serum as a preventive has been in force for some years in veterinary practice in cases of wounds, castration, or other surgical procedures. To this end the Pasteur Institute has supplied 7000 doses of antitetanus serum, a dose being 10 c.c., a quantity which has sufficed to treat preventively 3100 animals in those parts of the country where tetanus is endemic. Among these there has been no death from tetanus. In the case of one horse injected five days after receiving a wound tetanus developed, but the attack was slight. During the same time that these animals were injected the same veterinary surgeon observed among animals not treated by injection 259 cases of tetanus. There would therefore seem to be no doubt of the utility of preventive injections of serum in veterinary practice.

The Surgical Treatment of Exophthalmic Goitre.

At the same meeting of the Academy two very important communications were made by the respective champions of the rival methods for the cure of exophthalmic goitre by operation. M. Jaboulay spoke in favour of resection of the cervical sympathetic nerve, while M. Doyen held out for the total extirpation of the thyroid body. M. Jaboulay related how the idea of the operation he favoured came to him some eighteen months ago. Having removed the whole thyroid body, including the median lobe, in a goitrous patient without any relief being experienced, he remembered that the two most prominent symptoms in exophthalmic goitre—namely, exophthalmos and cardiac palpitations—could also be produced by an acute excitation of the cervical sympathetic, so he made up his mind to try section of this nerve in a case of this particular disease. He had operated upon nine patients and had obtained in all a great amelioration of the symptoms, besides which the operation was simple and devoid of danger. His method had been followed by other operators in various parts of France, and the number of cases reported up to the present was fourteen.[1] On the other side M. Doyen brought forward two cases of exophthalmic goitre treated by ablation of the whole of the thyroid body. In these patients the operation was followed by the immediate and lasting disappearance of all the symptoms. Notwithstanding that the cure seemed complete, one patient, although deprived of a thyroid, was attacked by a fresh crisis of exophthalmos, dyspnœa, and cardiac palpitation, but this was owing to her undergoing an untimely course of thyroid treatment, and the symptoms wholly subsided on all treatment being stopped. M. Doyen therefore advised ablation of the thyroid, and considered section or resection of the cervical sympathetic as a merely indirect method of treatment.

A New Method of treating Adherent Ulcer of the Stomach.

Dr. Delageniere, of Mans, reported to the Academy that in a complicated case of gastric ulcer, where perforation had taken place and the organ was adherent to the diaphragm, he detached the adherent portion together with a part of the muscle to which it was adherent, inverted the affected parts into the cavity of the stomach together with the bit of muscle, to the end that they might be digested, and brought the edges of the fold together with sutures. The patient rapidly recovered, and up to the present remains well. Dr. Delageniere considers that this operation is indicated in all cases of gastric ulcer which have resisted ordinary treatment.

The Paris Milk-supply.

This very important question is at present the leading topic in Paris. Two absolutely different opinions are evident. On the one hand, all the medical men demand that every precaution to ensure a supply of pure milk should be taken, together with sterilisation and a rigorous inspection of cowsheds, dairies, &c. On the other hand, those interested in the trade complain of the severity of these measures. The syndicate of cow-keepers in Paris and the suburbs have set forth their ideas on the matter, the President stating that owing to the progress which had occurred during the last fifteen or twenty years the sheds in Paris where milch cows were kept were in far better condition than many farms in the country. The most remarkable improvements had been introduced into the Parisian cowsheds, and although this might be due to the severe regulations of the municipal laboratory, still it could not be denied that they were there. Under these conditions they considered that they should no longer be treated as suspected persons, and with regard to the laws concerning tuberculosis they passed a series of resolutions. 1. That the declaration which all cow-keepers have to sign whenever one of their stock falls ill should remain in force, but only when the animal shows definite signs of tuberculosis. 2. That a penalty should only be inflicted by the

[1] THE LANCET, July 10th, 1897, p. 120.

court when the accused has acted in bad faith. 3. That the penalties enacted by the law of 1881 should be reduced. Dr. Budin, the chief physician to the Maternity Hospital, in his report dealing with milk foods and feeding, proposes that no milk below a certain standard of richness in fat should be considered as milk from the hygienic point of view or be sold under that name. For sterilisation boiling and keeping hot for three-quarters of an hour in a water bath of boiling water is sufficient for milk to be consumed within twenty-four hours. It is not enough that there should be a supply of good raw milk or even of sterilised milk, but means must be taken to bring such supply within reach of the poor of Paris, who are generally unable to procure good milk. Sterilised milk, or in some cases sterilisers, should be distributed among the necessitous mothers of Paris who at present cannot bring up their infants at the breast. Those mothers who are in slightly better circumstances might be given tickets for either milk or a steriliser. Milk might be called in certain cases an indispensable drug, and the *bureaux de bienfaisance* ought to be able to prescribe it like other drugs.

Aug. 3rd.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The German Commission on Plague.

THE members of the German Commission on Plague have recently returned to Europe, with the exception of Professor Koch, who went direct from Bombay to the German colonies in East Africa. Some preliminary notices of the work of the Commission have again appeared in the official papers of the Government. The Commission states that the bacillus of plague very easily perishes outside the human body or that of animals. Cultures of the bacilli were destroyed by boiling and by corrosive sublimate at once, by mineral acids within five minutes, by carbolic acid within ten minutes, and by milk of lime within an hour. In ordinary town water the bacilli died within three days, being unable to live without atmospheric oxygen. Pigeons, fowls, geese, and pigs did not show any reaction after injections of cultures of the bacilli; sheep and goats were more sensitive to the infection; whilst horses, and especially cattle, were very liable to contract the disease. All the animals artificially infected eventually recovered. The greatest liability to the disease was presented by rats, which, it was found, carried the bacilli from house to house, and in this way were very dangerous to the population. Grey monkeys were also very liable to the disease, but brown monkeys were not quite so readily affected. Monkeys were therefore used for the study of artificial immunisation. It was proved by experiments that injections of Haffkine's serum produced immunity, especially cultures of high virulence which had been exposed to a temperature of 65° C. (149° F.) for an hour. The immunity appeared after a period of from five to seven days. Monkeys immunised in this way were immune against about two milligrammes of a culture of plague bacilli. The serum of Yersin was also tested by the Commission. An injection of 2 c.c. of this serum given to brown monkeys made them immune against 2 c.c. of plague culture, but it was found that 1 c.c. was not sufficient for the purpose. With grey monkeys, however, the serum was useless. The immunity of brown monkeys lasted only eight days. Strong serum had a remedial effect on these monkeys, but there was no evidence that the disease occurring in the human subject could be treated in this way. The report further states that Professor Koch, on May 18th, visited the Portuguese town of Damaon, where he observed that the natives who lived in houses had nearly all caught the disease, whereas those who camped out were comparatively seldom attacked. The effect of 1400 injections performed there after Haffkine's method was to produce marked immunisation; some of these patients fell ill, but only twenty of them died, and in most cases the symptoms were mild. Some members of the Commission visited the North-West Provinces for the purpose of investigating a disease called mahamari, which is apparently identical with the bubonic plague.

The late Professor Joseph Oertel.

Dr. Joseph Oertel, Professor of Laryngology at Munich University,[1] and one of the leading physicians of Germany, died in Munich on July 13th. He was born in Dillingen, Bavaria, in 1835, and after having finished his curriculum at the University of Munich he went to Vienna, where Professor Czermak had just begun to introduce the laryngoscope into medical practice. After his return to Munich he became *privat-docent*, and in 1876 Extraordinary Professor of Laryngology. His principal publication during this time was a treatise on Epidemic Diphtheria, being a part of the great "Handbuch der speciellen Pathologie" edited by Professor von Ziemssen. He was known to be a very clever laryngologist, but his reputation was limited to this branch of practice, and it was therefore somewhat of a surprise to the medical profession when he published in 1884 a work entitled "The General Treatment of the Disorders of the Circulation," the subject being one which had no connexion with the department of medicine he had hitherto cultivated. In this treatise, which subsequently became one of the standard works on medical treatment, he argued that in order to remove œdema and other symptoms of circulatory troubles water must be withheld as much as possible and the heart must be strengthened by exercises of some kind, especially by walking uphill. To this end he prescribed a special diet, the principal points of which were the general discouragement of drinking, especially during meals, and an absolute prohibition against taking soups and other food containing much water. He endeavoured to strengthen the heart by the "terrain cure," which is generally known by all medical men. He first introduced this system at Meran, a health resort in the Tyrol, where he induced the local authorities to set up round the town notices by which patients could find out how far they had come, and whether the road before them was level or steep. This system of "terrain cure" was subsequently introduced in many health resorts, especially in Southern Germany, and whoever has visited Baden-Baden, Wiesbaden, Kreuth, Aussee, &c., must have seen the coloured marks so essential for this plan of treatment. Professor Oertel's first trials of his new method were made on himself. A true Bavarian, he was not averse to the use of beer; he was also very round-shouldered, and soon after entering on practice he began to suffer from œdema and other symptoms of cardiac failure. He then resolved to live in the way above described, and satisfied himself as to the soundness of his method by means of chemical and physiological observations. It was in his own case so successful that, as he told me himself, although he had for several years been unable to walk more than a few hundred steps at a time, he ultimately became able to climb mountains like strong people. Professor Oertel had an extremely kind manner, and was much liked by the numerous patients who came from all parts of the world to consult him.

The International Medical Congress at Moscow.

A correspondent whose letter appeared in THE LANCET of July 17th (page 168) complained of the difficulties which attend the remitting of money to Russia. In Germany the matter was arranged by our national committee appointing one of its number as treasurer, who received the money from the German members and sent it in one sum to Russia. He issued provisional receipts, which were taken as legal documents by the Russian consuls for the purchase of passports. This arrangement, however, was only in force till July 20th, and members inscribed after this date had to apply directly to the Russian committee. It was said that the Russian committee would send the requisite vouchers immediately, but although I entered my name some weeks ago I have not yet received anything from Russia, and as the Russian Consulate has retained the German receipt I have at present nothing to show as evidence of membership. There is thus some inconvenience in getting a railway ticket, which must be taken before August 1st, but it is hoped that the cards will arrive one of these days from Russia. Up to July 15th the names of 447 members from Germany were entered. The Army Medical Department will be represented by Generalstabsarzt Dr. von Coler and Oberstabsarzt Dr. Schjerning, the German Surgical Association by Dr. von Bergmann and Dr. Gurlt, the Berlin Medical Society by Dr. Senator and Dr. Landau, and the Verein für Innere Medicin by Professor Gerhardt. The German representatives,

[1] A brief obituary notice appeared in our issue of July 24th.—ED. L.

Professor Virchow, Professor von Leyden, and Dr. von Coler, will be received by the Czar at St. Petersburg. Dr. Voigt, medical superintendent of vaccination in Hamburg, warns German medical men and instrument-makers not to send articles to the exhibition connected with the Congress. He states that he was invited by the Russian Society of Public Health to send a collection of vaccination instruments to the Jenner commemoration held in Moscow last year, and he did so, but he had great difficulty in getting his collection back. The articles were forwarded on Nov. 15th, and as he had received no acknowledgment by Jan. 30th he sent several letters and telegrams to the secretary of the association. No answer, however, was returned, and the Russian Consulate, moreover, declined to take any steps in the matter. After having at last applied to the German Embassy he received in the middle of April a parcel containing a portion of the collection, but a good many of the objects had disappeared.

July 29th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Congress Fever.

FOR the next two months the Continent will be labouring under this now periodic autumnal visitation which in Italy especially assumes more and more the character of a "quotidian intermittent." The international assemblage at Moscow will, of course, for the early part of August, form the chief of its "foci of infection," but it will thereafter declare itself at innumerable centres, principally (as I have stated) in the Italian kingdom. I have already announced the gathering at Bergamo of the National Medical Congress of Italy,[1] and that will be followed by another, also on a national scale—the Eighth Congress of Internal Medicine, which is to hold its sittings this year at Naples. From the Neapolitan committee I learn that Professor Guido Baccelli, of Rome (where he directs the medico-clinical staff of the University Institute), Dr. Vincenzo Cervello (Professor of Pharmacology and Materia Medica in the University of Palermo), and Dr. Achille Spatuzzi (who fills the chair of Hygiene in the Naples School) have been severally approached with a view to their starting a special discussion in one or other of the subjects belonging to their personal department. This is an innovation on traditional practice in the programmes of these congresses, and though but recently tried it has worked exceedingly well in concentrating and economising attention and time, all too apt to be wasted among speakers, with whom the "parola facile" ("determination of words to the mouth") is an ethnological characteristic. Each of the distinguished professors above indicated has complied with the invitation, and Dr. Baccelli has already intimated his theme to be "La Sintesi della Malaria" (or Malaria considered in its Totality). Dr. Spatuzzi will discourse on the (historically and socially) interesting subject of the "Sommi Medici Napolitani nella Vita Publica" (the Neapolitan Leaders of Medicine in Public Life); while Dr. Cervello has still his special topic under consideration, to be announced some day soon. Besides these congresses there are others—hygienic, medico-psychological, balneary, epidemiological, ophthalmic, anthropological, medico-chirurgical—well-nigh numberless, among which may be mentioned the "Società Italiana di Laringologia, Otologia, e Rinologia," which (the third of the series) will meet on Oct. 28th next in the Roman University. The President will be Dr. Vittorio Grazzi, who holds the chairs of Aural Medicine in the Florentine and Pisan Schools, and among the papers read and discussed will be one introduced by Professor Gherardo Ferreri, of Rome, on the Value of Autoscopy in the Diagnosis and Treatment of Laryngeal Disorders; on Adenoid Affections in Italy, by Professor Giuseppe Gradenigo, of Turin; and on the Physiology of the Middle Ear, by Professor Giulio Masini, of Genoa.

Acute Dysentery in Sicily.

The health conditions of Sicily have more than a merely local interest now that (thanks to THE LANCET) the island has vindicated its claim before the professional world as a resort for the invalid and convalescent. From causes which have not yet been made clear, but prominent among which may be inferred the heat, well-nigh tropical, of the last few weeks, dysentery has appeared in the province of Messina rather formidable as to character and diffusion. Limina is the locality which has been most severely visited. Numerous cases of "dysenteria sanguinolenta," not a few of them terminating fatally, have occurred within the fortnight now ending, and the Prefecture has taken energetic measures to deal with it clinically, etiologically, and prophylactically. Dr. Fortunato, the provincial medical officer, is accordingly engaged on bacteriological examinations of the water, the food, and other sources of the malady, checking them by further scrutiny, also bacteriological, of the alvine dejections of the patients. This report, specially called for by the Ministry of the Interior, is not yet made public, but from what is already known of his findings in professional circles there is now no doubt that a considerable tract of Eastern Sicily is in presence of an epidemic closely resembling, if not in every point identical with, acute dysentery. One conclusion Dr. Fortunato and his staff have already reached, and that is that cholera, whether of the Asiatic or the milder European type, is absolutely excluded from their purview. Meanwhile, Count Buraggi, governor of the province, has issued orders of the most stringent kind, tending to isolate the epidemic and to allay the public alarm.

Typhoid Fever in Milan.

The Lombard capital—that great *entrepôt* of European and oriental travel, with its hotels so often crowded with the English-speaking world—is at present visited by typhoid fever, in all cases serious, in some fatal. According to the Ufficio Igienico Municipale there is no true *focolaio* (hot-bed) of the disease in any of the quarters of the city. The inhabitants are rather in the presence of a number of sporadic cases which the Ufficio is trying to minimise by increased surveillance over the *acqua potabile*. To this water it recommends the public to confine itself, and especially to avoid that furnished from the numerous local wells sunk in the subsoil, which have so often occasioned explosions of diphtheria as well as typhoid fever. A further injunction issued by the Ufficio forbids the eating of raw fruit, especially those *cocomeri* (water melons, green and red) so grateful to the popular palate in the dog days, but nevertheless the frequent cause of intestinal disturbance, rendering easier the lodgment of microbes in the alimentary tract—microbes (*inter alia*) conveyed in the impure ices of universal consumption.

Aug. 1st.

[1] THE LANCET, July 31st, 1897.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

Epidemic Mastitis.

DR F. SCHWARZ, of Pécs, has had an opportunity of studying an outbreak of epidemic mastitis during the spring of last year, the patients being twelve women, all of whom developed the disease in the first week following childbirth. There was not one case amongst them in which he could trace the disease to lesions of the skin covering the nipples or to sores in the mouths of the suckling infants. All the patients, however, had been attended by the same midwife, and Dr. Schwarz soon ascertained that she had charge of an infant suffering from stomatitis from whom she had undoubtedly carried infectious germs to the breasts of her other patients. The mastitis ran a somewhat different course from that usually observed. The onset was marked by a severe rigor, which was soon followed by hyperpyrexia, swelling of both breasts, and rapid formation of deep abscesses. Incisions liberated a quantity of thick pus, which was found to contain large numbers of streptococci and staphylococci. The healing of the abscesses, though appropriately treated, was somewhat prolonged.

Rupture of the Urethra caused while Cycling.

This interesting case was published by Dr. S. Baumgarten in the last number of the *Orvosi Hetilap*. The patient was a man, aged twenty years, who, whilst alighting from his bicycle, unfortunately struck his perineum against the edge of the saddle. He had to be carried home, and Dr. Klein found that he had a painful swelling the size of an orange

in the perineum, and that his underclothing was full of blood, which poured freely from the urethra. The bleeding soon stopped, and the swelling gradually diminished under the application of iced compresses. Dr. Baumgarten, who, a fortnight later, was called in on account of very difficult micturition, succeeded in introducing into the bladder along the upper wall of the urethra an English catheter No. 2, which was left in position for two days. Further treatment consisted in gradually introducing catheters of larger size. The normal permeability of the urethra was restored within twenty-two days. The urethroscope, introduced at the end of the treatment, revealed in the bulbous part of the urethra a pink-coloured transverse cicatrix indicating the site and the direction of the rupture.

Post-graduate Lectures in Budapest.

The medical faculty of Budapest has arranged for the delivery of post-graduate lectures in the Hungarian language, together with practical demonstrations of interesting cases, during the summer vacations, the main object of these lectures being to afford our provincial practitioners an opportunity of obtaining an insight into the most recent advances in medicine and surgery.

July 30th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Laws Relating to Pharmacy.

THE New York Legislature amended the public health law so that the article relating to pharmacy does not apply to the sale by retail dealers or merchants of ammonia, bicarbonate of sodium, borax, camphor, castor oil, cream of tartar, dye stuffs, Epsom salts, essence of ginger, essence of peppermint, essence of wintergreen, Glauber's salts, glycerine, liquorice, olive oil, Rochelle salts, sal ammoniac, saltpetre, salts of tartar, soda, and sulphur. In the same section "usual domestic remedies" include also paregoric and essence of anise.

"Knock out Drops" Forbidden.

The New York Legislature also amended the penal code as follows: "A person (other than a duly licensed physician or surgeon engaged in the lawful practice of his profession) who has in his possession any narcotic or anæsthetic substance, compound, or preparation capable of producing stupor or unconsciousness, with intent to administer the same or cause the same to be administered to another without the latter's consent, unless by direction of a duly licensed physician, is guilty of a felony punishable by imprisonment in the State prison for not more than ten years. The possession by any person (other than as exempted in the foregoing sub-division) of any such narcotic or anæsthetic substance or compound, concealed or furtively carried on the person, is presumptive evidence of an intent to administer the same or cause the same to be administered in violation of the provisions of this section."

Abuse of Dispensaries.

The subject of the abuse of out-door medical relief is exciting much discussion in the profession. A novel form of abuse has recently been reported. A physician has been dismissed from one of the dispensaries for taking a fifty-dollar bank-note from the purse of a patient. The purse was left upon the dispensary desk while the lady entered an adjoining room to prepare for examination. The plea made to the governing board by the physician was that he had been overworked, having treated over 400 patients at the dispensary during the three days preceding the temptation which caused his fall, and that during this time he had been able to procure but one full meal. Hunger and the means to appease it may have proved too strong a combination for his overwrought nerves, but this naturally did not weigh with the board.

The Influence of the "Drink-habit" in Causing Crime.

Dr. Wines, of Illinois, one of the most eminent statisticians of the United States, describes some of the statements made on this subject as utterly wild and irrational, without any support, in fact. Such a statement was that 90 per cent. of cases of pauperism, crime, insanity, &c., are due to drink. To say that was pure folly. There are pauperism and crime to be found in Mohammedan countries as well as in Christian countries. Drink is not a cause of crime; the cause of crime lies deeper—in the depravity of the human heart, not in any material thing. He then briefly analyses the police returns of twelve of the largest cities of the United States, showing that about half of the arrests are protection arrests, not for crime, and a large number of the residue are for petty misdemeanours, violations of city ordinances, &c., leaving about one quarter for serious offences. The average of arrests per saloon per year is between six and seven of all sorts, and eliminating the protection arrests and the petty misdemeanours it turned out that the average is one and a half arrests per saloon. Wardens of prisons who are new generally think intemperance the cause of crime. After an experience of a dozen years or so they generally see differently. Liquor never puts into a man a new impulse—it removes the restraint on impulses which he has already. And he remarked that in a number of prisons where convicts are confined for murder there are about as many total abstainers as drinkers.

Caring for Epileptics.

Dr. Rutter, of the Hospital for Epileptics, of Ohio, who has had great success in the treatment of this class, gives a detailed account of the measures adopted, and one interesting feature is that of diet, which he has found was very important. A free meat diet he condemned, and it is used only for the mid-day meal, and then only fresh beef, roasted or boiled mutton, fowl, or fish. Meals are served in courses to ensure deliberation in eating. Fruit, fresh or if not canned or dried, is given freely, and is the principal article for breakfast and supper, supplemented by some cereal and milk. No pastry is allowed, and no article is fried. Bread is usually given stale. Coffee is given for breakfast and milk *ad libitum* for other meals. Many vegetables, like cabbage, cucumbers, &c., have not been found harmful.

July 28th.

Obituary.

HENRY THOMPSON, M.A., M.D. CANTAB., F.R.C.P. LOND.,

SENIOR FELLOW OF ST. JOHN'S COLLEGE, CAMBRIDGE; CONSULTING PHYSICIAN TO THE MIDDLESEX HOSPITAL.

THE death, at the advanced age of eighty-one years, of Dr. Henry Thompson removes from our ranks one of the most learned members of the profession and one of the most unassuming. He was born at Workington, Cumberland, and became a distinguished scholar of Shrewsbury School, then under the headmastership of Dr. Samuel Butler. The well-known "Sabrinæ Corolla" contains some exquisite Greek and Latin verses from Thompson's pen, proving that he had an early bent towards classical studies, which culminated later in his receiving a Fellowship at St. John's College, Cambridge. He elected to follow the profession of medicine, and studied at St. George's Hospital, obtaining his M.D. degree in 1853. In 1855 he was elected assistant physician to the Middlesex Hospital, where he also lectured on Materia Medica from 1855 to 1869, became physician four years later, and in 1872 senior physician. He retired from the acting staff in 1879, but continued to reside in London until his death.

Dr. Henry Thompson was little known in the medical world outside his own hospital, but there he was held in great esteem. Enabled to devote himself largely to hospital work—for he practically had no private practice, nor did he desire to have any—he was most regular and punctual in his attendance, and notable for the care with which he examined and treated his patients. His clinical observations were marked for their accuracy and his judgment was well balanced and sound. He did not teach much at the bedside, but those who had the good fortune to serve under him as house physicians are unanimous in their testimony to his qualities as a physician. His clinical lectures (on the preparation of which he took great pains) were models of terse and thoughtful exposition, and prove that his knowledge was wide and accurate. Some of them have appeared in these columns, and after resigning the office of physician he collected a few into a volume of clinical lectures and cases with commentaries (Churchill, 1880), which is full

of suggestiveness and practical insight. Those who best knew him have regretted that he did not take a more prominent place, for there can be no question that he was a physician of the first order. But he was as remarkable for his modesty and freedom from ambition as he was for his high talents; he was contented with the life he had chosen, and no one can deny that he did not faithfully and scrupulously fulfil his duties as an ideal hospital physician. He was a man of fine presence, kindly and gentle in manner, earning the admiration and affection of pupils and colleagues. Of late he had become physically very feeble, and his death occurred after a brief illness, an attack of diarrhœa causing exhaustion, from which he could not rally.

Medical News.

VICTORIA UNIVERSITY.—On July 30th the following degrees were conferred by the Vice-Chancellor (Dr. N. Bodington) in the Owens College:—

MASTER OF SCIENCE.

William Henry Moorby, Owens College.

BACHELOR OF MEDICINE AND OF SURGERY.

Second-class Honours.—William Hirst Bateman, Owens College; Joseph Everett Dutton, Walter Graham, and Arthur Stanley Griffith, University College; Harold Hartley, Owens College; David Garnett Hurter, University College; Charles Herbert Moorhouse, Yorkshire College; John Henry Sheldon, Owens College; and Robert Sutherland, University College.

Mark Aungier, University College; Thomas Fletcher Bamford, Owens College; Robert Wilfred Bollans, Yorkshire College; John James Butterworth and James Bertram Clarke, Owens College; Francis Darlow and Philip Henry Fearnsides, Yorkshire College; Henry Martyn Henderson, University College; Arthur Thomas Lakin, Owens College; John Reginald Lambert, Yorkshire College; Alexander Lawson, Owens College; John Harold Mason, Yorkshire College; John Mooney and Archibald McLelland Pilcher, Owens College; Francis Stanhope Pitt-Taylor, University College; John Prestwich, Frank Pritchard, Alexander Low Rhind, and Alfred Wightwick, Owens College; and James Hayward Willett, University College.

In the Faculty of Medicine the following candidates have been successful in the subjects indicated:—

FIRST EXAMINATION.

Part II. Biology.—Roy Appleton and P. W. Ashmore, Yorkshire College; F. H. S. Ashworth, J. B. Barnes, and J. H. Battersby, Owens College; H. M. Berry, University College; C. H. Booth, Yorkshire College; Neville Bradley, University College; S. B. Brentnall, Owens College; R. N. Butterworth, and W. H. Canter, Yorkshire College; J. B. Cook, Alexander Cran, and E. N. Cunliffe, Owens College; S. W. Davies, University College; A. M. Deane, Yorkshire College; Tom Eastham, J. E. Floyd, and F. W. Gatenby, Owens College; G. W. Gelderd, University College; P. H. Green, J. W. Greenwood, and P. T. Harding, Owens College; F. W. Hayes, Yorkshire College; Godfrey Heathcote and Rowland Heathcote, Owens College; J. P. Henderson and A. G. Jackson, University College; S. J. C. Johnson, C. P. Lapage, and Charles Mackey, Owens College; H. C. McManus, University College; C. T. Matthews, Yorkshire College; Herbert Maxfield, Owens College; J. S. W. Nuttall, University College; G. G. Parkin and R. T. A. Patchett, Owens College; H. D. Pearson, Sydney Platts, and M. B. Potts, Yorkshire College; H. H. Rayner and Arthur Richmond, Owens College; William Rotherham, University College; Edwin Saville, Yorkshire College; F. R. Sawdon, G. H. Shaw, W. F. Shaw, S. W. Swindells, and H. G. Tansley, Owens College; J. C. Teasdale and M. G. Walker, Yorkshire College; H. C. Waterhouse and Alwyn Wharton, Owens College; R. G. Wills, University College; B. M. Wilson and J. G. Woolham, Owens College; and F. W. B. Young, University College.

SECOND EXAMINATION.

A.—Anatomy and Physiology.—S. W. Battle, Yorkshire College; George Binns, J. P. Brown, and W. J. Butcher, Owens College; J. S. Byrne, University College; H. H. Bywater, E. W. Falconer, P. A. L. Foulds, Henry Holt, H. S. McLellan, F. A. Morrison, R. S. Nichol, T. E. Regan, and Harry Scholefield, Owens College; G. M. Sharpe, Yorkshire College; Harold Snape, Owens College; W. A. Stott, Yorkshire College; Edward Swales, University College; R. N. West, Owens College; R. D. Willcocks, University College; and P. G. Williamson, Owens College.

B.—Materia Medica and Pharmacy.—Granville Ainsworth and Arthur Anderson, Owens College; E. W. Anderton, Yorks College; M. B. Arnold, E. M. Ashcroft, and J. T. Bailey, Owens College; Herbert Bates, University College; A. D. Beckett, Owens College; Philip Benington, University College; A. T. Blease, Owens College; Henry Brown, Yorkshire College; P. A. Browne and C. W. Budden, University College; Fred. Bullough, E. R. Cooper, J. M. Cort, Daniel Cowin, and C. W. Crawshaw, Owens College; J. L. Dimond, University College; T. H. B. Dobson, Owens College; W. F. Ellis, Yorkshire College; R. J. Ewart, University College; A. H. B. Fletcher, Yorkshire College; H. E. Fox, Mercier Gamble, Walter Garstang, D. G. Gellatly and Reginald Gordon, Owens College; Frederick Griffith, University College; F. G. Hack, C. R. Hall, and W. D. Hamer, Owens College; F. W. Harrowell, Yorkshire College; L. C. Johnson, Owens College; R. E. Kelly, University College; Reginald Lawrence, C. H. Lee, H. S. Lister, and James McIlraith, Owens College; J. C. Mann, University College; H. J. Moon, Owens College; T. F. Pugh, University College; P. A. H. Radcliffe, Yorkshire College; Albert Ramsbottom and Sidney Renshaw, Owens College; E. E. Roberts, University College; J. H. Sutcliffe and R. W. Taylor, Yorkshire College; Thomas Tierney, Owens College; C. R. Willans, Yorkshire College; T. B. Williams, Owens College; F. P. Wilson, University College; and J. D. Windle and W. A. B. Young, Owens College.

FINAL EXAMINATION.

Part I.—D. A. Alexander and J. W. Anderson, University College; D. A. Ashton and J. T. Auld, Owens College; J. W. Barber, Yorkshire College; T. T. Bark, University College; H. P. Clarke and John Craig, Owens College; H. R. Cross, Yorkshire College; William Crozier and S. S. Depree, University College; E. C. Dutton and E. W. Floyd, Owens College; Joseph Goodall, Yorkshire College; J. P. H. Greenhalgh and Roland Hamer, Owen's College; H. F. Hart, University College; T. W. Hart, Owens College; E. M. Hime, Yorkshire College; Frederic Hoyle, Owens College; F. W. Inman, University College; H. H. McNabb, E. J. Martin, and John Mooney, Owens College; S. C. Moore, University College; Harry Osborne, W. H. Richardson, and William Rigby, Owens College; Ambrose Spong, Edward Trotter, and Edward Turton, Yorkshire College; G. C. Walker and L. S. Whitwam, University College; and T. H. Wignall and O. H. Woodcock, Owens College.

Part II.—Mark Aungier, University College; T. F. Bamford and *W. H. Bateman, Owens College; R. W. Bollans, Yorkshire College; J. J. Butterworth and J. B. Clarke, Owens College; Francis Darlow, Yorkshire College; *J. E. Dutton, University College; P. H. Fearnsides, Yorkshire College; *Walter Graham and A. S. Griffith, University College; *Harold Hartley, Owens College; H. M. Henderson and *D. G. Hurter, University College; A. T. Lakin, Owens College; J. R. Lambert, Yorkshire College; Alexander Lawson, Owens College; J. H. Mason, Yorkshire College; John Mooney, Owens College; *C. H. Moorhouse, Yorkshire College; A. M. Pilcher, Owens College; F. S. Pitt-Taylor, University College; John Prestwich, Frank Pritchard, A. L. Rhind, and *J. H. Sheldon, Owens College; *Robert Sutherland, University College; Alfred Wightwick, Owens College; and J. H. Willett, University College.

* Awarded second-class honours.

In the Faculty of Science the following candidates have passed the Intermediate Examination:—

D. M. Alexander and Helen P. Auld, University College; A. R. Dwerryhouse and E. L. Gill, Yorkshire College; J. L. Hawkes, University College; Alexander Hodgkinson, Owens College; and C. O. Jones, W. G. Lloyd, and E. A. Rosenheim, University College.

The Diploma in Public Health has been awarded as follows:—

J. H. Ashworth, H. P. Butterworth, W. E. Davies, and T. W. H. Garstang.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Paul Silex, First Assistant of the University Ophthalmic Clinic, has been promoted to an Extraordinary Professorship.—*Breslau:* Dr. Henle, of the University Surgical Clinic, has been recognised as *privat-docent* in Surgery.—*Montpellier:* Dr. Rodet, *agrégé*, has been appointed Professor of Microbiology.—*Paris:* Dr. R. Blanchard, *agrégé*, has been appointed Professor of Medical Natural History.—*Zürich:* Dr. Georg Ruge, Professor of Anatomy in Amsterdam, has been offered the Chair vacated by Professor Philipp Stoehr on his migration to Würzburg. He was formerly Gegenbauer's assistant in Heidelberg, and has written a good deal on Descriptive and Comparative Anatomy and also on Embryology.

THE CHOLERA SEASON IN INDIA.—Although there is a certain amount of cholera and choleraic diarrhœa in Bombay and Poona, and a somewhat increased prevalence of these diseases at Sholapoore, it appears that the summer in India generally has so far been a healthy one as regards epidemic disease. Cholera, which threatened to be severe in the central parts of the country in the spring, has died out, according to the *Pioneer Mail*, except in the Deccan, and the plague has practically now ceased as regards its epidemic form.

MANCHESTER SOUTHERN HOSPITAL.—The annual meeting of the Manchester Southern Hospital was held on July 21st in the Lord Mayor's Parlour, Sir John Harwood presiding. The report showed that 5656 cases have been treated during the year. At the Clifford-street branch of the hospital 146 women and 283 children had been admitted as in-patients, while 994 women and 2320 children attended as out-patients. There were also 1233 maternity cases treated at their own homes and 180 admitted as in-patients. The income for the year was £2598 and the expenditure £3644, showing a deficiency of £1048. It was stated by the secretary that the trustees of the late Mr. David Lewis had offered to provide a building fund for a new hospital or amalgamated institution consisting of the Southern Hospital and St. Mary's Hospital, and the committee of the Southern Hospital were willing to accede to the proposals; but to their regret the scheme had not been carried out.

HEALTH OF LIVERPOOL.—435 births and 240 deaths were registered in the city during the week ending July 17th. The patients under treatment in the city hospitals for infectious diseases numbered 261; 40 patients were suffering from typhoid fever and 196 from scarlet fever.

MEDICAL MAGISTRATES.—Mr. Wm. J. Morton, M.D. Aberd., L.R.C.P., L.R.C.S. Edin., of Inverell, New South Wales, has been appointed a visiting justice to the gaol at Inverell.—Mr. James Jamieson, M.D., Ch.M. Glasg., of Melbourne, Victoria, Australia, has been appointed a Justice of the Peace.—Mr. Thos. A. Grieves, L.R.C.P. Lond., M.R.C.S. Eng., of Wyalong, New South Wales, has been appointed a Justice of the Peace for the colony.

ROCHDALE INFIRMARY.—In commemoration of the Queen's long reign the people of Rochdale resolved to add a new wing to their infirmary, and this extension was formally opened by Lord Stanley, M.P., on July 24th. The proceedings commenced by the mayor and corporation, preceded by a band of music, walking in procession from the Town Hall to the infirmary. Lord Stanley was then presented with a gold key, with which he unlocked the door of the new building. In the course of an address delivered by Mr. S. Turner, president of the infirmary, it was stated that the committee had for some time been desirous of enlarging their premises, and during the present year the gift of a sum of £18,000 received from the trustees of the late Mr. James Holden enabled them to erect this extension, which will be designated the Holden Wing. The Holden trustees had on a former occasion given £2000, and other contributions have resulted in the formation of a guarantee fund amounting to £24,000.

DIPHTHERIA IN LONDON.—In the four weeks ended on July 17th the amount of diphtheria in London, as gauged by the certificates of notification, was in excess of the preceding period of like length. In fact, we have to go back to the four-weekly period ended on Nov. 28th last to find a total of notifications higher than that of the July period, although it is true that the five-weekly period which concluded last year, ending on Jan. 2nd, 1897, also yielded a larger weekly average of cases notified. In the July period the notified attacks numbered 1011, yielding a weekly average of 253 against averages of 224 in June, 288 in December, and 290 in November. But if we compare the July period of this year with that of 1896 we find that the record of last year exceeds the current one by 58 notifications in the four corresponding weeks. In the July period of the present year all the sanitary areas of London were invaded; five of them had respectively 50 or more notified attacks, with an aggregate of 331, whilst other five had only 14 notifications of diphtheria amongst them. The registered deaths in the June period were 137, and in July 135; but the per case rates of mortality varied more, being in June 15·3 and in July 13·3 per cent. of the notifications. In July of last year the deaths were 167, and the rate 15·6 per cent.; in November, 220 and 19·0 per cent. respectively; and in December (five weeks) 257 and 17·8 per cent. respectively. Thus, with an increasing amount of diphtheria, we seem this year to have, for the time at least, a milder form of the disease.

PRESENTATIONS TO MEDICAL MEN.—Mr. Richard Youl, M.D. St. And., M.R.C.S. Eng., City Coroner of Melbourne, Victoria, Australia, was the recipient, on May 26th last, of an enlarged and framed photograph of himself as a token of esteem.—Mr. Edwin Hinchcliff, M.D. Edin., M.R.C.S. Eng., received on his leaving the Bendigo District, Victoria, Australia, a handsome present from the Sandhurst No. 1 Fire Brigade, of which he was the honorary surgeon.—Mr. L. F. Praagst, M.B., C.M. Melb., late medical superintendent of Horsham District Hospital, Victoria, Australia, was, on May 27th last, given a complimentary entertainment on his leaving the district.—Mr. L. G. Fraser, M.B., B.S. Durh., of North Shields, at a meeting on the 27th ult. of the North Shields Centre of the St. John Ambulance Association, was presented by the women's class with a lamp, and by the men's with an illuminated address, in recognition of his instructive lectures to the classes.—At the annual meeting of the Western Branch of the British Dental Association, held at Exeter on July 23rd, Mr. J. T. Browne-Mason, L.D.S. Eng., the honorary treasurer, was presented with a pair of silver bowls, and Mr. T. A. Goard, M.R.C.S. Eng., L.R.C.P. Lond., L.D.S., the honorary secretary, received a silver salver. The presentations were made by Mr. Dudley, of Bath, on behalf of the members of the western branch of the association.—Certificates in connexion with St. John Ambulance classes at Trethosa and Nanpean were presented on July 22nd, when Mr. A. Shaw, M.B., C.M. Glasg., was the recipient of a handsome riding whip and a silver butter cooler in appreciation of his services as honorary lecturer.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—At a meeting held on July 16th, Dr. Milligan (President) in the chair, Mr. George Stoker showed two cases of Suppurative Otitis and a case of Ozæna, which had been treated successfully by oxygen gas after prolonged treatment by other methods had given a negative result. The gas employed was a mixture of oxygen and purified air, as pure oxygen was, as a rule, found too irritating to be employed alone.—Dr. Macnaughton Jones pointed out that the great difficulty in treating cases of suppurative otitis lay in keeping the patients a sufficient time under observation to enable the local treatment to be efficiently carried out. He had treated ozæna with oxygen by means of Mr. Stoker's apparatus without any success.—Mr. Bark showed a case of Epithelioma of the Right Vocal Cord removed by thyrotomy. The patient, aged forty-one years, had suffered for two years from hoarseness due to the presence of a greyish white papillated growth in the right vocal cord, which, together with the ventricular band and the arytenoid cartilage, was removed after thyrotomy, the patient making a rapid and uneventful recovery.—Mr. Lennox Browne reported a case of Epithelioma of the Soft Palate in a man aged forty-eight years. The soft palate was greatly infiltrated and the seat of a warty growth which extended to the faucial pillars, but did not appear to involve the tonsils; the tongue and larynx were perfectly free. The growth was successfully removed under cocaine, and the patient made an excellent recovery, with a rapid increase in weight. The growth proved on examination to be a typical epithelioma.—Dr. Middlemass Hunt opened a discussion on "The Preliminary Training and Methods of Operating on Laryngeal Growths," and referred to the great assistance cocaine was in intra-laryngeal operations, both in shortening the time required to complete the operation and simplifying the necessary manipulation. It did not, however, do away with nervousness on the part of the patient, and certain preliminary training was necessary in most cases. Under cocaine anæsthesia cutting forceps had taken the place of snares, guillotines, caustics, &c., and the rough and uncertain methods of Voltolini had utterly disappeared.—Dr. Milligan and others took part in the discussion.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Workmen's Compensation Bill.

IN the course of the consideration of this Bill in the House of Lords an amendment was inserted providing that if an injured workman objects to the employer's medical man or to his report he may submit himself for examination to one of the medical men appointed for the purposes of the Act, whose certificate shall be conclusive evidence as to his condition.

London University Commission Bill.

Although this Bill got through all its stages in the House of Lords, when it reached the House of Commons it was threatened with serious opposition from various quarters; and in view of the pressure of other work and the arrangements for concluding the session Mr. Balfour decided to withdraw it. In intimating this decision he expressed the hope that next session the Government may be in a position to deal with the subject.

London Water Question.

In both Houses of Parliament the London water question has been a good deal discussed during the week. In the House of Lords there was a second reading debate on the Metropolitan Water Companies Bill, in the course of which Lord James of Hereford explained in detail the nature of the inquiry to be carried on by the Royal Commission. In the House of Commons Mr. Chaplin answered a great many questions with reference to shortness of supply in East London.

HOUSE OF COMMONS.

THURSDAY, JULY 29TH.

The Army Medical Department.

Captain Norton asked the Under Secretary of State for War whether it had been brought to his notice that officers of the Army Medical

Department suffered severely from frequent moves at short notice, coupled with difficulty of obtaining leave, to such an extent that an officer of eleven years' service serving at home had recently to pay about £30 to enable him to obtain a part of the ordinary leave to which he was entitled by regulation, although the leave in question was for urgent private affairs—namely, to visit a sick wife at his proper station, he being on detachment; and whether he would take steps to deal with these hardships.—Mr. Brodrick replied: Officers of the Army Medical Staff are moved from station to station as seldom as possible and only when the necessities of the public service demand. Ordinarily a departmental officer can only have leave of absence when it does not cause additional expense to the public; but as the home establishment is under strength and inconvenience resulted, arrangements have been made whereby a substitute for an officer on leave is provided without expense to that officer when the establishment of the district is not full.

Beri-beri in Ireland.

Mr. Sheehy asked the Chief Secretary to the Lord-Lieutenant of Ireland whether he was aware that the medical superintendent of the Richmond Asylum had been complaining about the overcrowded condition of his institution in his annual reports since 1886 to the governors; and that a contract, involving nearly a quarter of a million sterling on the new asylum at Portrane, was given away by the Board of Control, which was an unrepresentative body, without consultation with the Board of Governors; whether he would state to the House the amount of money expended on temporary buildings which had been condemned by Dr. Patrick Manson, of London, and by Sir Thornley Stoker, of Dublin; and whether his attention had been called to the statement in the Inspectors' Report for 1891 that the Richmond Asylum was originally constructed for 600 patients, that there were now considerably over 1800 patients in the asylum, and that the additional temporary accommodation did not even provide for the increase in the numbers, since the inspectors reported in 1890 that the congestion paralyses every effort to treat the insane.—Mr. Gerald Balfour replied that the fact was as stated in the first paragraph. It was not true that the contract for the Portrane Asylum was given away by the Board of Control without consultation with the Board of Governors. The expenditure on the temporary buildings which were erected with the concurrence of the governors amounted to about £12,000. The medical gentlemen referred to considered wooden buildings unsuitable for the treatment of beri-beri patients, but the buildings erected at Richmond had been designed with every possible attention to sanitary requirements, and were, in the opinion of the inspectors of lunatics, suitable for the accommodation of the insane.

MONDAY, AUG. 2ND.

Sale of Food and Drugs Bill.

At this sitting Mr. Chaplin formally introduced a Bill to amend the Acts relating to the sale of food and drugs. He explained that it gives effect to some of the least controversial of the recommendations of the Select Committee on Food Products Adulteration, but that it was only introduced now in order that during the recess the general drift of opinion on the subject might be ascertained.

The Vaccination Question.

During the discussion in Committee of Supply on the vote for the salaries and expenses of the Local Government Board Mr. Channing complained of the delay in dealing with the vaccination question, and suggested that in the meantime a circular should be issued to boards of guardians advising them not to repeat prosecutions.—Mr. Chaplin said that after he received the report of the Vaccination Commission he found it necessary to have further inquiries made by the experts of the department, and the results of these inquiries had only recently reached him. From a hasty perusal of them he was led to believe that sooner or later there would be a complete reform of all the laws relating to vaccination.

TUESDAY, AUG. 3RD.

Vaccination Commission.

Sir M. White Ridley, in reply to Colonel Dalbiac, said that the appendices to the report of the Royal Commission on Vaccination could be presented at once, and would probably be circulated in two or three weeks. The delay was attributable to the fact that the necessity for a separate presentation of these appendices was, through some misunderstanding, overlooked.

BOOKS, ETC., RECEIVED.

ADLARD AND SON, Bartholomew-close, London, E.C.

King's College Hospital Reports. Vol. III. (Oct. 1st, 1895, to Sept. 30th, 1896). 1897. Price 7s. 6d.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.

Franzensbad. An Austrian Health Resort. Illustrated. 1897.
A Handbook of Diseases of the Nose and Pharynx. By J. B. Hall, M.D. Lond. Third Edition. Illustrated. 1897. Price 7s. 6d.
Diseases of the Gall-bladder and Bile Ducts. By A. W. M. Robson, F.R.C.S. 1897. Price 7s. 6d.
A Manual of Practical Medical Electricity. By Dawson Turner, B.A., M.D., F.R.C.P. Edin., M.R.C.P. Lond. Second Edition. 1897. Price 7s. 6d.
Anatomy and Physiology of the Female Generative Organs and of Pregnancy. By A. E. Giles, M.D., B.Sc. Lond., M.R.C.P. Lond., F.R.C.S. Edin. Price 5s. net.

BERGMANN, J. F., Wiesbaden.

Die Therapeutischen Leistungen des Jahres 1896. 8. Jahrgang. 1897.
Die Diagnostik Innerer Krankheiten mittels Röntgenstrahlen. Von G. Rosenfeld. 1897.
Stereoskopische Bilder. 24 Tafeln. Zum Gebrauch für Schielende. Von Dr. A. Pflück. 1897.

BLACK, ADAM AND CHARLES, London.

Through Finland in Carts. By Mrs. Alec Tweedie. 1897.

CASSELL AND COMPANY, London.

The Practitioner. Edited by Malcolm Morris. Old Series, Vol. LVIII. New Series, Vol. V., Jan. to June, 1897. 1897.

CHURCHILL, J. & A., Great Marlborough-street, London.

Convergent Strabismus and its Treatment. An Essay. By Edwin Holthouse, M.A., F.R.C.S. 1897. Price 6s.
A Handbook of Medical Climatology. By S. E. Solly, M.D., M.R.C.S. Illustrated. 1897. Price 16s.

CLAY, C. J., Ave Maria-lane, London.

The Life-Histories of the British Marine Food-Fishes. By W. C. McIntosh, M.D., LL.D., and A. T. Masterman, B.A. Cantab., B.Sc. Lond. 1897. Price 21s.

FISCHER, GUSTAV, Jena.

Lehrbuch der Physiologischen Chemie. Für Studirenden und Aerzte. Von R. Neumeister. Zweite Auflage. 1897.
Allgemeine Physiologie. Von Max Verworn. Zweite neu bearbeitete Auflage. 1897.
Bibliographischer Semesterbericht. Von Dr. G. Buschau. Zweiter Jahrgang, 1896. Zweite Hälfte, 1897.
Handbuch der Speciellen Therapie Innerer Krankheiten. 1. Supplementband. 2. Heft. Von F. von Winckel. 1897.
Die Wertbemessung des Diphtherieheilserums. Von Dr. P. Ehrlich. Sechster Band. 1897.
Handbuch der Anatomie. Von Dr. K. von Bardeleben. Fünfter Band. Erste Abteilung. 1897.
Handbuch der Therapie Innerer Krankheiten. Von Drs. F. Penzoldt und R. Stintzing. Zweite Auflage. Erste Lieferung. 1897.

GOVERNMENT PRINTING OFFICE, Washington.

Reports on Vital and Social Statistics in the United States at the Eleventh Census, 1890. By J. S. Billings, M.D. Parts 2, 3, and 4. 1890.

HIRSCHWALD, AUGUST, Berlin.

Studien über Säuglingsfäces, &c. Von Dr. M. Blauberg. 1897.
Die Hefen als Krankheitserreger. Von Dr. C. Busse. 1897.
Vorlesungen über Kriegschirurgie. Von Dr. L. Lühe. 1897

JENKINS, W. R., Sixth-avenue, New York.

A Text-book of Veterinary Ophthalmology. By George G. Vad Mater, M.D., D.V.S. Illustrated. 1897.
Exercises in Equine Surgery. By P. J. Cadiot. Translated by A. W. Bitting, D.V.M. Edited by A. Liautard, M.D., V.M. Illustrated. Authorised Edition.

JOUVE, HENRI, Paris.

La Maladie de Thomsen. Par Dr. A. Kornhold. 1897.

LEWIS, H. K., Gower-street, London.

A Contribution to the History of Leprosy in Australia. By J. A. Thompson, M.D., D.P.H. 1897.

LONGMANS, GREEN, AND CO., Paternoster-row, London.

Wounds in War: the Mechanism of their Production and their Treatment. By Surgeon-Colonel W. F. Stevenson, A.B., M.B. 1897. Price 18s.

MACMILLAN AND CO., London.

A System of Medicine. By Many Writers. Edited by T. C. Allbutt, M.D. Vol. III. 1897. Price 25s. net.

MASSON ET CIE., Paris.

Artérites et Scléroses. Von A. Brault.
Les Troubles Auditifs dans les Maladies Nerveuses. Par Dr. F. J. Collet.

SCOTT, W., Paternoster-square, London.

Hallucinations and Illusions: A Study of the Fallacies of Perception. By Edmund Parish. 1897. Price 6s.

SIMPKIN, MARSHALL, HAMILTON, AND CO., London.

The Epic of Sounds: an Interpretation of Wagner's Nibelungen Ring. By Freda Winworth. 1897. Price 3s. 6d.

SOCIÉTÉ D'ÉDITIONS SCIENTIFIQUES, Paris.

Vade-Mecum de Posologie et de Thérapeutique Infantiles appliquées. Par Dr. H. Dauchez. 1898.
Les Poussières Atmosphériques. Par J. R. Plumandon.

STEINHEIL, G., Paris.

Le Cervelet; Étude Anatomique, Clinique et Physiologique. Par Dr. A. Thomas. 1897.

THE F. A. DAVIS COMPANY, Philadelphia.

Eye Strain in Health and Disease. By A. L. Ranney, A.M., M.D. Illustrated. 1897.

THE NEW SYDENHAM SOCIETY, London.

The New Sydenham Society's Lexicon of Medicine and the Allied Sciences (based on Mayne's Lexicon). Part 23. Puke–Scap. 1897.

THE IDEAL PUBLISHING UNION, Farringdon-street, London.

Fruits and Farinacea, the Proper Food of Man. By John Smith. 1897.

THE SANITARY PUBLISHING COMPANY, Fetter-lane, London, E.C.

Dangerous Infectious Diseases. By Francis Vacher. Reprint 1897. Price 1s. 6d.

WILLIAMS AND NORGATE, Henrietta-street, Covent-garden, London.

Outlines of Psychology. By Wilhelm Wundt. Translated by Charles H. Judd, Ph.D. 1897.

The New Book on Aluminium: from the Aluminium Supply Company, 38, Victoria-buildings, Manchester, 1897.—The Middlesex Hospital Reports for the Year 1895 (H. K. Lewis, London, 1896); price 2s. 6d. net.—The London Manual, 1897-98: edited by Robt. Donald (Horace Marshall and Son, Fleet-street, London); prices 1s. 6d. and 1s.—The

Journal of Mental Science, July, 1897 (J. & A. Churchill, London).—Medical and Surgical Reports of the Boston City Hospital: eighth series (published by the Trustees, Boston, Mass., 1897).—Diet Chart and Alimentary Index: suggested by M. J. Kenny, L.R.C.P. Edin., L.R.C.S. Irel. (J. Wright and Co., Bristol, 1897); price 1s. 6d. net.—Magazines, &c., for August: Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Sunday Hours, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Chapman's Magazine, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, Pearson's Magazine, English Illustrated Magazine, Knowledge, and Humanitarian.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ATKINSON, J. M., M.B. Lond., D.P.H. Camb., has been appointed Principal Civil Medical Officer at Hong Kong, vice Ayres.

BENNETT, F. G., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed *pro tem.* Officer of Health for the Shire of Alberton, Victoria, Australia.

BLACKMORE, G. J., M.B., C.M. Edin., has been appointed Assistant Medical Officer for the Workhouse of the Nottingham Union, vice W. F. Byford, resigned.

BOND, F. S., L.R.C.P. Lond., M.R.C.S., Eng., has been appointed a Public Vaccinator at Bruthen, Victoria, Australia.

BUICK, JAMES, M.B., Ch.M. Glasg., has been appointed Resident Surgeon to the Bendigo Hospital, Victoria, Australia.

CLAYTON, F. M., M.B., B.S. Durh., has been re-appointed Medical Officer of Health by the Felling Urban District Council.

CONNAL, JAS. G., M.B., M.S. Glasg., has been appointed a Physician to the Throat and Nose Department of the Glasgow Central Dispensary.

DAVIES, J. L., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Munslow Sanitary District of the Ludlow Union.

FRANCIS, H., M.B., B.S. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Arnold Urban District Council.

GOING, J. A., M.R.C.S. Eng., has been appointed Medical Officer to the Mungindi Hospital, New South Wales.

GOWAN, B. C., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Hendon Rural District Council.

HARDING, R. F., L.R.C.P., L.R.C.S. Irel., has been appointed Assistant Medical Superintendent to the Hospital for the Insane, Goodna, Queensland.

HARRIS, G. J., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Glenfield Sanitary District of the Blaby Union.

HENRY, L., M.D. Wurzb., L.R.C.P. Lond., has been appointed a Certifying Medical Officer under the Factories and Shops Act for the Metropolitan District of Victoria, Australia.

HINE, A. E. B., L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed a Public Vaccinator for South Australia.

JAMIESON, JAS., M.D., Ch.M. Glasg., has been appointed an Official Visitor to the Yarrow Benevolent and Metropolitan (Kew) Lunatic Asylums, Victoria, Australia.

KELLY, H. G., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Public Vaccinator at Pyramid Hill, Victoria, Australia.

LAYTON, HENRY A., M.R.C.S. Eng., L.R.C.P. Edin., has been appointed Medical Superintendent to the Cornwall County Asylum, Bodmin, vice Richard Adams, resigned.

LIDDLE, P. H., M.B., Ch.B. Melb., M.R.C.S. Eng., has been appointed Officer of Health for the Shire of Mansfield, Victoria, Australia.

MCDOUGALL, MARY ROSS, M.B., C.M., has been appointed Resident Medical Officer to the Edinburgh Hospital for Women and Children.

MORCOM, A., L.R.C.S., L.M. Edin., has been re-appointed Medical Officer of Health by the Luton Rural District Council.

READ, S. J. D., M.B., Ch.B. Melb., has been appointed a Resident Surgeon to the Rockhampton Hospital, Queensborough.

SHAW, F. C. S., M.B., Ch.M. Syd., has been appointed a Government Medical Officer and Vaccinator for the District of Emmaville, New South Wales.

SLADE-KING, E. J., M.D. Edin., L.R.C.P. Lond., M.R.C.S., D.P.H. Edin., has been re-appointed Medical Officer of Health by the Dulverton Rural District Council.

THANE, E. H., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed a Surgeon to the Wagga Wagga Hospital, New South Wales.

THOMSON, WM. E. F., M.D. Edin., has been appointed Professor of Physiology at the Anderson's College Medical School, Glasgow.

VENTERS, ISABEL, M.B., C.M., L.R.C.P. & S. Edin., has been appointed Assistant Medical Officer to the Edinburgh Hospital for Women and Children.

WARRINGTON, W. B., M.D. Lond., M.R.C.P., has been appointed Demonstrator in Physiology in University College, Liverpool.

WILLIAMS, J., M.D. Edin., M.R.C.S. Eng., has been appointed a Member of the Medical Board of Victoria, Australia, vice J. D. Tweeddale.

WILSON, FRANCIS KENNETH, M.B., B.S. Lond., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to Westminster Hospital.

WORTS, E., L.R.C.P. Lond., M.R.C.S., has been re-appointed a Surgeon to the Essex and Colchester Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House Physician. Salary £65 per annum, with board, lodging, and washing in the Hospital.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Senior House Surgeon. Salary £100 per annum, with board, washing, lodging, &c.

BRITISH INSTITUTE OF PREVENTIVE MEDICINE, 101, Great Russell-street, London, W.C.—Bacteriologist to the Antitoxin Department at Sudbury. Salary £200 per annum, with dwelling accommodation on the premises.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House Surgeon. Rooms, coals, and lights provided.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W. — Clinical Assistant.

CHILDREN'S HOSPITAL, Nottingham. - House Surgeon (non-resident) for six months. Salary at the rate of £100 per annum.

CORNWALL COUNTY ASYLUM, Bodmin.—Junior Assistant Medical Officer, unmarried. Salary £100 a year, increasing £10 yearly to £120 a year, with board, lodging, &c.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, London.—Senior Resident Medical Officer. Salary £70, with board and washing.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—House Physician for six months. Salary at the rate of £60 per annum, with board, lodging, and washing.

GUEST HOSPITAL, Dudley.—Resident Medical Officer. Salary £100 a year, increasing £10 a year to £120, conditionally, with board, residence, attendance, and washing.

HUNTINGDON COUNTY HOSPITAL, Huntingdon.—House Surgeon. Salary £50, with board, lodging, and washing.

LANCASHIRE ASYLUMS BOARD.—Medical Attendant on the Patients for the Idiot Boys' Asylum at Winwick, near Warrington. Inclusive salary 100 guineas per annum. Applications to the Clerk to the Lancashire Asylums Board, County Offices, Preston.

LAWN HOSPITAL FOR THE INSANE, Lincoln.—Assistant Medical Officer.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £70 per annum, with board and residence in the Institution.

PARISH OF BOLESKINE AND ABERTARFF.—Medical Officer for the Fort-Augustus District. Applications to Mr. A. Urquhart, Inspector of Poor, Gorthleck.

ROTHERHAM HOSPITAL AND DISPENSARY.—House Surgeon for three years. Salary 100 guineas, with board, lodging, and washing.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. Board, lodging, and washing provided.

ROYAL SURREY COUNTY HOSPITAL, Guildford. — Assistant House Surgeon. Board, residence, and laundry provided.

Births, Marriages, and Deaths.

BIRTHS.

ARNOLD.—On July 31st, at Oxford-road, Manchester, the wife of F. S. Arnold, M.B., of a son.

ETTLES.—On July 20th, at The Crescent, Minories, E.C., the wife of W. J. McCulloch Ettles, M.D., of a son.

HAWKE.—On July 27th, at Valley-road, Shortlands, the wife of Edward D. H. Hawke, L.R.C.P. Lond., M.R.C.S., of a son.

HUBBARD.—On July 31st, at Hemel Hempstead, the wife of Arthur John Hubbard, M.D., of a son.

PRICE.—On July 31st, at Fireside, Walton-on-Thames, the wife of Arthur E. Price, M.B. Lond., L.R.C.P., M.R.C.S., of a son.

MARRIAGES.

ALLAN—CLARK.—On July 31st, at the Church of St. Mary Magdalene, Latimer, Bucks, by the Rev. F. C. J. Long, Arthur Percy Allan, M.B., B.S. Lond., of South Croydon, youngest son of the late John Allan, of Calcutta and Ladbrook-grove, W., to Margaret Hannah, daughter of the late Richard Clark, of Amersham.

BUCHANAN—WOODHOUSE.—On July 31st, at the parish church, Weybridge, Archibald Graham Buchanan, L.R.C.P. Lond., M.R.C.S., Liss, Hants, to Mabel Berkeley, second daughter of Henry Melvill Woodhouse, of Brackenhurst, Weybridge.

HANDS—WHEELER.—On July 29th, at All Saints' Church, Cheltenham, Francis William Hands, L.D.S. Eng., to Margaret Ursula Langham, youngest daughter of the late Robert Wheeler, solicitor, of Cheltenham.

THORNTON—SHEERMAN.—On July 28th, at Holy Trinity, Beckenham, Frank B. Thornton, M.B., B.S. Lond., of Derby, to Florence Anne, eldest daughter of Henry Sheerman, of Newlands Park, Sydenham.

DEATHS.

BLISS.—On July 28th, at Perrysfield House, Oxted, Surrey, Francis Henry Bliss, M.B., eldest surviving son of Sir Henry Bliss, in his 29th year.

PALMER.—On July 28th, at 87, Harcourt-terrace, S.W., Edward Palmer, M.D., in his 81st year.

TOMLINSON.—On July 31st, at Belgaum, India, from typhoid fever, Surgeon-Lieutenant Lionel Philip Tomlinson, A.M. Staff., younger son of Brigade-Surgeon E. D. Tomlinson, of 8, Earl's-avenue, Folkestone. (By telegram.)

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 5th, 1897.

Date	Barometer reduced to Sea Level and 32° F	Direction of Wind	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Maximum Temp Shade	Min Temp	Rainfall.	Remarks at 8.30 A.M.
July 30	30·30	N.E.	68	63	121	79	63	...	Fine
,, 31	30·15	N.E.	67	62	122	79	62	...	Fine
Aug. 1	30·13	N.E.	60	56	114	79	55	...	Overcast
,, 2	30·10	N.E.	60	57	127	86	56	...	Hazy
,, 3	30·20	E	62	58	121	81	58	...	Overcast
,, 4	30·09	S.E.	71	66	123	88	62	...	Fine
,, 5	29·84	S.E.	74	68	123	88	65	...	Hazy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1897, which was completed with the issue of June 26th, was given in THE LANCET of July 3rd. It is intended, in future, to include the Index and Title-page for each past half-yearly volume in the first number of the succeeding volume, as in the present case, instead of in the last number of the volume itself, as heretofore.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1897 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

A QUERY IN OPHTHALMIC SURGERY.

To the Editors of THE LANCET.

SIRS,—May I ask the favour of an answer to this question: A young maiden girl, aged twenty-one years, perfectly healthy, breathing healthy mountain air all the year round, has a ripe cataract in one eye; the sight of the other eye is perfect. This cataract is not traumatic. Would it be desirable to operate?

I am, Sirs, yours faithfully,

Llandilo, Aug. 4th, 1897. X. Y. Z.

A HEROIC REMEDY.

To the Editors of THE LANCET.

SIRS,—The enclosed cutting from to-day's issue of a well-known evening paper is not without interest:—

(35,811) EYES.—Will "Bornall, M.D.," please explain? He says (Reply 35,513):—"Paint the part with chloroform of aconite." The part in question is my eyes. How do I paint them?—*Oculist.*

"Oculist" seems to have sought the professional guidance of the gentleman responsible for the inquiry column of that journal, who prescribes with equal confidence and equal light-heartedness for a bruised finger and for an ovarian tumour. The extraordinary advice given in reply to his inquiry seems to have awakened in his mind some faint doubts as to his mentor's infallibility. Hence the mild protest thinly veiled by to-day's query. It would be interesting to know on whose shoulders the responsibility would have rested if this confiding sufferer had adopted the remedy proposed.

I am, Sirs, yours faithfully,

T. R. HENDERSON, M.B., C.M. Edin.

Ivycroft, Balham, S.W., July 31st, 1897.

Verax.—The M.R.C.S. of the date mentioned was considered to possess a medical qualification. If a registered medical practitioner were required he clearly was able to fill the post.

SUSCEPTIBILITY OF CHILDREN TO HOSPITALISM.

A CORRESPONDENT in America writes to us as follows: "There is a tendency just now towards the multiplication of special hospitals for infants (at any rate, so it is in America), and it may not be out of place to sound a note of warning on some of the dangers attending such a course. Children should only be sent to hospitals when it is impossible to care for them properly at their own homes and in cases of acute illness. This statement applies particularly to infants; the younger the child the greater the pernicious influence of hospital life, and instances of quick or satisfactory recoveries in a hospital are rare. This fact has been exemplified in a striking manner in several of the large hospitals in France, especially in the case of 'l'Hôpital Trousseau,' which was characterised a year or two ago as a veritable death-trap. Dr. Chapin, of New York, has lately drawn attention to the great susceptibility of infants to hospitalism; he says: 'One of the first conditions to be noted is a progressive loss of weight that is not dependent on the original disease, as it often takes place after recovery when the child is not sent out soon enough. This atrophy bears an inverse ratio to the age and is especially marked under six months. Beginning atrophy, not depending upon a lesion, should be an indication for immediate discharge from the hospital. If it gets beyond a certain point no change of environment or food will save the infant. As a general rule young infants should not be kept in hospital longer than a fortnight.' Another danger that is most difficult to guard against is the great risk of contagion, and the larger the hospital the greater the danger. The nursing should be of the highest possible description; ordinary efficiency in this respect will not suffice. In many cases a good nurse should be supplied to four or five infants, and in some a nurse may be required for only two patients. The infants should be under the most careful oversight, and at the first signs of hospitalism should be discharged without delay."

Undergrad.—What has been told our correspondent is correct concerning the diploma in question. For details he should consult the Students' Numbers of THE LANCET for the past nine years.

G. W.—No. The more usual style is Dr. ——, provided that the owner of the card is a graduate in medicine of a recognised university.

F. W. ELLISON FUND.

The following sums have been received:—

	£	s.	d.		£	s.	d.
THE LANCET Relief Fund	15	0	0	Mr. H. A. Francis, of Victoria, British Columbia	2	2	0
Sir T. Smith	10	10	0	Vicar of St. Paul's, Macclesfield	1	1	0
Dr. Lauder Brunton ...	5	5	0	Mr. W. Bruce Clarke ...	1	1	0
Mr. Howard Marsh ...	5	5	0	Mr. Harrison Cripps ...	1	1	0
Sir Dyce Duckworth ...	3	3	0	Mr. W. M.	1	1	0
Mr. W. H. Hatfield ...	2	2	0				

Fair Play.—Our attention is called to the advertisements of "Camwal Table Waters and the testimonials from leading practitioners of Brighton by which they are supported. We entirely agree with our correspondent that such testimonials are to be disapproved, as they amount to an advertisement of the medical man who writes the testimonial. We think, however, that the General Medical Council could hardly be expected to give time to the consideration of the matter, while we believe that the medical men in question have been sinned against.

"THE PATHOLOGY OF DISTEMPER."

To the Editors of THE LANCET.

SIRS,—I do *not* say that distemper in the dog will produce scarlet fever or diphtheria in human beings, but that it is only a stage in the life history of these organisms, comparable to the tæniæ. Although we do not know the intermediate host at present, despite the high authority of the men you mention, I believe we shall be able to find one. How do you explain the clinical symptoms, which correspond so closely?

I am, Sirs, yours truly,

Ashton-under-Lyne, Aug. 1st, 1897. F. W. MANN, M.B. Edin.

Ellerhouse.—We do not know the book in question, so that we cannot recommend it or one "giving similar information." But perhaps our correspondent refers to the well-known little book by Mr. Jukes de Styrap, entitled "A Code of Medical Ethics," and published by H. K. Lewis, Gower-street, E.C.

O. L. is referred to his or her medical attendant. Firstly, we do not prescribe or suggest medical treatment, and secondly, we do not understand our correspondent's question.

A CORONER ON DEATH CERTIFICATES.

THE *Western Morning News* of July 20th and July 24th gives an interesting account of the proceedings at an inquest held at Gwennap, near Redruth, on July 19th. The deceased was nine months old and was the son of a labourer; the body had been buried, but was exhumed for the purpose of the inquest. Mr. William Hichens, who was deputy for his brother, the parish medical officer, said that he visited the deceased on March 4th, March 7th, and May 31st, and found that he had slight bronchitis. On July 9th he received an urgent request for a death certificate and gave a note worded as follows: "I hereby certify that six weeks ago I saw the baby of Mrs. Samuel Collins. It was then suffering from a slight attack of bronchitis. Since then I have not seen it." That was not a certificate; he told the grandmother that he did not know the cause of death and could not certify. Mr. Thomas Curnow, the registrar of births and deaths, said that on the information given him by the child's grandmother and the note from Mr. Hichens he registered the death as not certified. He had known the people a long time. The registrar had absolute discretionary power as to registering a death except where it was sudden, violent, suspicious, or the cause unknown. The coroner (Mr. Laurence Carlyon) said his complaint was that the information in this case was not sufficient or satisfactory, so as to warrant the registering of the death. The jury returned a verdict of "Death from natural causes," and added a rider that medical men should give death certificates on the proper form or not at all. At a meeting of the Redruth board of guardians, held on July 23rd, the clerk, who is also the superintendent registrar, said that the coroner, in reference to death certificates, showed ignorance of the Registrar-General's regulations. He added that Mr. Hichens's letter was a most proper one, and it was clearly the registrar's duty to register the death as uncertified.

Enquirer.—From our correspondent's account we do not think that C can be held to blame. The situation is an annoying one, and we understand that he honestly tried to escape from it. B and C should take care not to allow their professional intercourse to be in the least affected thereby.

Socratus.—There can be no doubt that the owners of the diplomas mentioned are wrong in their assumption of the title of "Dr." unless they have other claims.

F. P. P.—The information has been forwarded to our correspondent.

THE PATHOLOGY OF OPIUM SMOKING.

DR. COLBORNE, writing in the *Phonographic Record*, says, from personal experience in China, that the Chinese can detect an opium smoker by the expression of his face. There are a flattening of the features, a general want of expression, and a look of ill-health, as if the motor nerves of the muscles of the face were more or less permanently interfered with. These or similar nerves would probably be influenced in the same way in thought and the higher cerebral operations, and the altered facial expression probably indicates a deterioration in the action of the higher cerebral nerves generally. From this Dr. Colborne concludes that the evil effects of the habit—the carelessness, shamelessness, and deterioration in public and private actions—are easily explained, and, moreover, that they are due to the absorption of morphia, of which the ill-effects are sufficiently well known. Although this opinion is not corroborated by the conclusions of the Opium Commission, Dr. Colborne contends that the question cannot be considered settled, and that in many opium smokers it is possible to recognise the traces of the habit, just as medical men in England detect the effects of drink upon some patients who consult them.

TUBERCULOSIS AND MEAT.

To the Editors of THE LANCET.

SIRS,—Would any of your readers kindly supply me with authoritative information as to the degree of tuberculous disease which should render the carcase of a cow unfit for human food? If one lung was found completely destroyed by the disease, should the whole carcase be condemned and destroyed? The name of any book or article on this subject would be acceptable.—I am, Sirs, yours truly,

July 28th, 1897. M. S.

ERRATUM.—In our appointment column of July 3rd the appointment was announced of T. F. Keenan, M.B., B.S. Durh., as Medical Officer for the Referagh Dispensary District of the Carrickmacross Union. Dr. T. F. Keenan, of Middlesbro', writes to us to point out that he knows nothing of the place or the appointment in question, and we wish to express our sincere regret that such a mistake should have occurred.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (11th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (12th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (14th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (10th).—ROYAL BOTANIC SOCIETY (Regent's Park).—1 P.M. Annual meeting. Mr. J. S. Rubinstein will bring forward motions recommending the Council (*a*) to Establish Classes in the Gardens for the Study of Botany to be open to all Students; (*b*) to Invite the Royal Horticultural Society to Confer as to the Feasibility of Effecting a Union of the two Societies; (*c*) to Increase the Facilities for the holding of Exhibitions, Garden Parties, or Receptions in the Gardens by Local Authorities and by leading Societies and Institutions.

During the week marked copies of the following newspapers have been received:—*Manchester Guardian, Staffordshire Chronicle, Yorkshire Herald, Brighton Gazette, Jarrow Express, Hull Daily Mail, Bradford Argus, Sheffield Evening Telegraph, Eastern Morning News, Builder, Lincolnshire Echo, Wolverhampton Express, Middlesex Courier, Times of India, New York Herald, Le Figaro, Pioneer Mail, Le Temps, Rangoon Times, Hampshire Telegraph, Leicester Post, South Wales Daily News, Architect, Brighton Argus, Newcastle Journal, Carlisle Express, Liverpool Daily Post, Cumberland Advertiser, Salisbury Journal, Walsall Advertiser, Bristol Mercury, Rushden Echo, Temperance Record, Western Morning News, Leeds Mercury, Kentish Independent, East Anglican Times, Birmingham Gazette, Yorkshire Post, Cork Examiner, Scotsman, Sanitary Record, Local Government Chronicle, City Press, Hertfordshire Mercury, Weekly Free Press and Aberdeen Herald, Reading Mercury, Brighton Gazette, Mining Journal, Surrey Advertiser, Public Health, Guy's Hospital Gazette, Westminster Review, Gazette (Montreal), Manchester City News, Flintshire Observer, Peterborough Express, Sussex Daily News, West Middlesex Herald, Gloucester Journal, Hexham Courant, Kent County Standard, Local Government Journal, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Dr. J. Adam, West Malling; Abstainer, Lond.; Anderson's College Medical School, Glasgow, Secretary of; Messrs. Ashmore, Benson, Pease, and Co., Stockton-on-Tees; Mr. R. B. Anderson, Lond.; Apollinaris Co., Lond.; Dr. T. D. Acland, Lond.

B.—Mr. W. Baker, Lond.; Messrs. Blackie and Son, Lond.; T. B. Browne, Ltd., Lond.; Messrs. Brown Bros., Lond.; Dr. E. T. Blank, Rovio, Lugano, Italy; Dr W. M. Banks, Liverpool; Dr. Campbell Black, Glasgow; Mr. H. E. Bridgman, Burton-on-Trent; Mr. W. Berry, Wigan; Mr. H. C. Berry, St. Albans; Gebrüder Borntrager, Berlin; Blackburn and East Lancashire Infirmary, Secretary of.

C.—Dr. E. Chaumier, Paris; Mr. A. Cook, Cardiff; Messrs. Cassell and Co., Lond.; Comaltana Wine Co., Heckmondwike; Dr. W. T. Cocking, Sheffield; Mr. H. J. Catmur, Clapham-park; Cæsar, Lond.; Chelsea Hospital for Women, Secretary of; Mr. T. Cooke, Lond.; Messrs. A. and H. Cox and Co., Brighton.

D.—Messrs. J. W. Drysdale and Co., Lond.; Messrs. Deighton, Bell, and Co., Cambridge; Dental Hospital, Lond., Dean of; Mr. H. H. Dodwell, Lond.

E.—Eastbourne Waterworks Co., Chairman of.

F.—Señor el Doctor Fragoso, Seville, Spain; Fromm's Extract Co., Lond.; Dr. T. Fisher, Bristol.

G.—Dr. W. T. Gairdner, Comrie; Messrs. Giles, Schacht, and Co., Clifton; Dr. R. M. Gill, Malaga; John Griffiths Cycle Corporation, Manager of; Dr. T. Gibson, Tranmere.

H.—Mr. H. B. Hewetson, Leeds; Mr. A. E. Huband, Loughborough; Mr. G. F. Hilcken, Lond.; Dr. W. J. Harris, Lond.; Messrs. Hampton and Co., Lond.; Surgeon W. E. Home, Portsmouth; Mr. A. Helbig, Lond.; Mr. J. Heywood, Manchester; Dr. C. Holman, Lond.; Mr. E. Huxley.

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The Twelfth International Medical Congress.

(MOSCOW, 1897.)

MEDICINE. PAST AND PRESENT, IN RUSSIA.

I.

Introductory.

MOSCOW will shortly be the scene of an International Medical Congress, the twelfth of those great meetings which are successively held in different countries, and which will now gather for the first time on Russian soil. With Russia for the time being the centre of the medical world it seemed not unlikely that a description of some of her medical institutions would prove as interesting as it could not fail to prove instructive. It was with the object of describing these as they now are in the present year of grace that the following articles had their inception. It soon, however, became clear that the existing condition of medical institutions in this most interesting of countries could only be properly understood by treating them historically and tracing them up from their earliest origins to their present state of advanced development. The original scheme of the articles had in consequence to be much expanded. But, as though in compensation, a large number of facts and incidents in the history of medicine in Russia were brought to light in the course of this investigation into the little known records of the past, which cannot, we believe, but prove of real interest to English members of the profession and, more particularly, to those who intend to take part in the Congress in Moscow. These alone appeared to justify the more expanded treatment of the subject.

To Englishmen there are, indeed, many striking features in this history. Firstly, English medical men have played a not unimportant part in the introduction and improvement of the medical arts in Russia. Among the foreign medical graduates who have from time to time entered the Czar's service our own countrymen have always held a leading, and at one time held quite the first, position. It seems but right at the present moment that the names of these half-forgotten worthies should be resuscitated from the English and Russian records of their times; that their interesting and, in some instances, historically important experiences should again be briefly told; and that due prominence should be given to the generous treatment they invariably received from their Imperial patrons. Should the part played by Englishmen seem to be brought unduly forward in the following pages the excuse must be that this was almost inevitable in articles intended for English readers, and that no discourtesy is thereby implied to the memory of the many medical worthies of other nationalities who may have filled equally important positions, but whose stories are more briefly told.

A second striking fact in the history of medical institutions in Russia is one which is common to the history of almost all institutions in that country. No English historian of Russia has failed to notice the contrast between the growth of institutions in the two countries. With us they have usually originated in the initiative of private individuals or communities, who have only ultimately gained for them the recognition and approval of the State. In Russia this course of events has been usually reversed. There the Czar, as the *Batushka* or "little father" of his people, has in times past usually summoned from abroad cunning artificers, physicians, surgeons, and men of learning, and with their aid has planned and organised professional or other institutions, and trained the people to a recognition of their value and use. In one case the impetus has been from below upwards, in the other case from above downwards. Each method has had its advantages. Each course was, perhaps, inevitable from the history, geographical position, and national characteristics of the two peoples. And, so far at least as concerns the particular group of institutions which will here be considered, each has ended in providing the country with a series of such institutions and a private and public medical service of the nature best adapted to meet its needs. It is not intended here to compare the wants of the two countries or the way in which they are provided for; but it may be said in passing that few capitals in Europe can show a more perfect series of hospitals, laboratories, and other medico-scientific establishments than may be found in St. Petersburg and Moscow; in a word, nowhere are the needs of scientific medicine more fully recognised or more generously satisfied than in the Russian capitals. Of the truth of this statement visitors to the Congress will have ample opportunities of judging for themselves, for, with the courtesy characteristic of our Russian *confreres*, the medical institutions of both cities

will be thrown freely open to the inspection of all members of the Congress.

A no less interesting object of study than the provision for the medical wants of the capitals is presented in the country districts of Russia by the efforts of the *zemstvos*, or local administrative bodies, to provide the peasants with a system of free medical aid. Finally, there is the immense machinery of state medicine and the public health service forming a vast bureaucracy, with a Medical Council and Medical Department at the head, all of which present characteristics worthy of study. In this connexion attention may be called to the fact that the present Medical Department is a direct descendant, without a break, of the old Court *Apteka*, or Dispensary, which was probably first instituted by an English apothecary late in the sixteenth century.

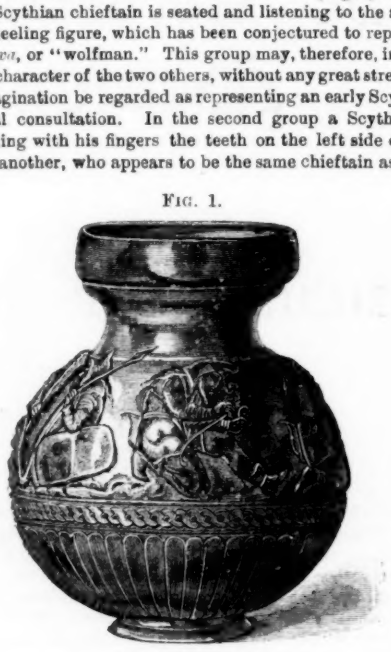
The information upon which the following notes upon medicine, past and present, in Russia are based has been gathered from a variety of sources. The historical facts have been taken from contemporary records, both Russian and English, from historical works in both languages, and from numerous pamphlets and articles in Russian periodicals, to enumerate which would serve but little purpose. The light thus cast upon one of the by-paths of history, hitherto ignored by the general historian, appears to throw no little reflected light upon the broader and more trodden paths. The description of the medical institutions of to-day is based as far as possible upon actual observation and documentary evidence; but for much supplementary information it is our pleasant duty to express our sincere thanks to many of our Russian *confrères*; to Professors Klein, Erismann, Diakonof, Roth, Pospiélof, and Filatof of Moscow; to Professors Pashutin and Sklifosovski, and Dr. Ragozin of St. Petersburg; to Dr. Isaief and Dr. Dobrotvorski of Cronstadt; and finally to His Excellency Count Delyanof, the Minister of Public Instruction, and his secretaries, Messrs. Latyshef and Anitchkof, for details and statistics relating to the universities and medical education in Russia.

II.

The Earliest History of Medicine in Russia.

THE first chapter of the history of medicine in Russia opens at a period when—if the bull be permitted—medical science as such did not exist. Its germs were there, however. Even so early as the arrival of the more or less mythical Rurik, from which the history of modern Russia usually dates, its traces may be found. Such knowledge of the healing art as then existed was entirely in the hands of the *Koldunui* and *Volkhvui*, the *Kudesniki* and *Viédunui*—the wizards and wolf-men, the sorcerers and seers—grey-haired old men who wandered about in woods, who expounded the cult of the Pagan religion, who transmitted the ancient traditions and laws from generation to generation, and who were prophets, seers, chiromancers, and magicians. This was in the early centuries of the Christian era,[1] when the Russian country and race first appear in definite outline on the page of history. It is tempting to recur to a still earlier period, when Russia was inhabited by a race of whom scarcely an outline remains, if only for the fact that among the dim traces which time has spared of them is a record pointing clearly to their knowledge of the art of surgery. Of the Scythian race, their origin and history, comparatively little is known; but of their customs and arts much has been learned from the superb collection of Scythian relics recovered from the tombs of Kertch and southern Russia generally and now preserved in the Hermitage in St. Petersburg. In this collection, which consists for the most part of personal ornaments and vases of gold or other metal, is a small vase made of the combination of metals known as electrum. This beautiful little object was found in a tomb at Koul-Oba, and is generally known as the Koul-Oba vase. It is considered by experts to be of Greek workmanship, but the figures which it bears are purely Scythian. The vase is ornamented with three groups of figures in *repoussé*, and all three of these are of curious interest. (Fig. 2). In the first a Scythian chieftain is seated and listening to the advice of a kneeling figure, which has been conjectured to represent a *volkhva*, or "wolfman." This group may, therefore, in view of the character of the two others, without any great stretch of the imagination be regarded as representing an early Scythian medical consultation. In the second group a Scythian is examining with his fingers the teeth on the left side of the jaw of another, who appears to be the same chieftain as that

FIG. 1.



The Koul-Oba Vase.

represented in the first group. In the third the same two figures again recur, but in this instance the chieftain has evidently been wounded in the leg, which the surgeon is binding with a long bandage. Now, in examining the chieftain's skeleton found in the tomb from which this vase was taken a curious fact was brought to light. Two teeth in the left side of the jaw were wanting, and around the third, which was diseased, were signs of inflammation of the bone. In addition, the bones of the left leg are said to have shown traces of injury. It seems almost certain, then, that the incidents depicted on the vase were really important ones in the life of this forgotten Scythian chieftain. It were pleasant, did space permit, to linger on this interesting little relic, and to dwell upon the accuracy of detail and the vividness with which the actions are represented. It is the perfection of realism—a realism in no way destroying, but rather enhancing, the decorative effect.

The peculiar and unusual character of the groups just described has led to some speculation as to the purpose for which the vase they adorn was originally intended. That it was meant for some purpose more or less closely connected with medicine seems probable, and a suggestion has recently been made that it originally contained some poison. There is evidence that among the Scythians when a chieftain was buried his wife, his horse, and several slaves were buried alive with him in the same tomb. The Koul-Oba vase was found close to the remains of the chieftain's wife, and it has been thought that it may have contained a poison humanely put within her reach to enable her to put an end to

[1] Rurik is thought to have gone to Russia in 862.

her sufferings. This for the present remains an open question. Dr. Zmćief tried quite recently to throw some further light on the matter. He obtained some scrapings from the dried crust which lines the vase and submitted them to chemical and microscopic examination. He was able to determine that they contained neither opium nor arsenic, but apparently came to no positive conclusion as to their composition.

Nearly 1200 years elapse between the date of the Græco-Scythian relic found in the Koul-Oba tomb[2] and the time of Rurik. During the interval history is almost silent. On matters relating to medicine she is absolutely silent. It is only after the "Norman Conquest" of Russia, in the year 862 A.D., that the story again takes definite shape, and known historical characters begin to replace the more or less mythical heroes of the earlier period. As the mists clear away the warrior princes are naturally the first to take outline. But next to them there are no figures which become so clearly defined as those of the grey-haired sages already briefly described. Russian writers have loved to dwell upon them, to paint them as men of real dignity and sometimes of sublime independence—tall grey figures wandering in the "grey-haired *Koldoun*" is a familiar figure to all readers of Russian national literature.

In the tenth century Christianity was introduced into Russia. It came from Byzantium, and with it came such knowledge of medicine and the other arts as Byzantium then possessed. There, as elsewhere in Europe, the care of the sick was part of the duty of the monastic profession. The earliest Russian monastery was the famous Petcherskaia Lavra, or Monastery of the Caverns, in the newly-built capital of Kief. The earliest monks in Russia came direct from Mount Athos, where St. Athanasius had built a hospital for the sick. They carried with them the medical knowledge they had there gained, and the Petcherski monks soon became famous for their skill in treating disease. The names and reputation of a few individual monks are still preserved in the monastic chronicles. Anthony, a St. Athos monk, was considered a marvellous physician; Alimpi was reputed to cure leprosy by means of an ointment; Agapit, a pupil of Anthony, worked wonders with his *zelié* or simples, not only among his brethren, but among the laity. This last monk is the hero of an amusing tale of rivalry between himself and a lay "doctor," an

FIG. 2.

A Diagram representing the groups of figures on the Koul-Oba Vase. (Like Fig. 1, this illustration comes from a picture in Mr. A. Maskell's work "Handbook on Russian Art.")

untouched forest and culling simples on the banks of the Dnieper or the Bug, where doubtless they learned something of

> "the powerful grace that lies
> In herbs, plants, stones, and their true qualities."

Not infrequent references to them and their knowledge may be found in the *Builinui*, those interesting and (to Englishmen) too little known national epics, which sing the deeds of knights and heroes, real and mythical—of Vladimir the Great in his white-walled city of Kief and of his warriors ever seeking fresh adventures in the open field. In "Ilia Murometz"—the most popular of these epics—Ilia lies for thirty-three years in sloth and impotence, until the seers or wizards give him a honeyed drink. He drinks a "bucket and a half," and all his strength returns, and he is enabled to go into the arena and overcome the monster Solovei, whom he brings bound to his stirrup to the very courtyard of the Prince Vladimir's palace. It was a *kudesnik*, "beloved of the gods," who stopped King Oleg in a dark forest and foretold to him the strange manner of his death. The legend is told in one of Pushkin's best known poems. But it is needless to multiply instances; the Armenian, who settled in Kief, and there practised medicine with no little success. The layman treated the highest *boyars* and even the Prince Vsevolod himself. On one occasion he was summoned to attend the Prince's favourite *boyar*, but finding him apparently beyond recovery he declined further to treat him. He told him that he had but eight days to live. The *boyar* in despair sent for Agapit, who gave him his usual simples, and in the end the great man recovered and the monk was covered with glory. The Armenian was furious with jealousy and a very pretty quarrel began between the two practitioners. At last the Armenian hit upon a plan by which he hoped to ruin the other. He obtained a condemned criminal, gave him some poison, and sent him as a patient to Agapit in order that he might die before his eyes and in spite of his treatment. But the plot failed. The monk recognised that the man was poisoned, gave him some antidote, and saved his life, thus further increasing his reputation. The quarrel then became still more acute. The famous Prince Vladimir Monomakh (it was he who married Gytha, the daughter of our own Saxon King Harold) had been long treated by the Armenian without success. Again the monk stepped in and cured the patient by merely sending him his herbs! But at length Agapit

[2] The vase is ascribed by experts to the fourth century B.C.

himself fell ill and was visited by his rival. A medical discussion began, and ended with the Armenian exclaiming contemptuously: "This man knows nothing of our art." He took the hand of the monk (perhaps to feel his pulse) and told him he would die in three days. "That is your way of treating disease, is it?" said the other. "You have more to say about death than about helping me. I tell you my death will not come in three days, but in three months." And so it did—a fact which seems to have so struck the Armenian that he at once joined the Church and became a monk in the same monastery. The story, with its series of triumphs of ecclesiastical over lay medicine, and its characteristic ending (it is told by a Petcherski monk), is of interest in more ways than one. Among other things it shows that in the eleventh century poisons and antidotes were known and used; and also as Professor Zagoskin (from whose book it is here quoted) rather quaintly remarks, "because it shows that even then methods of competition between rival practitioners were in vogue not in consonance with their high calling and with the demands of what we now call 'medical etiquette.'"

With the coming of Christianity and the Byzantine monks the fate of the ancient sages and wizards was sealed. The new Church entered into a fierce persecution of the whole race of *kudesniki* and their allies. They sent them to the gallows or the stake and pronounced the practice of magic or sorcery a crime against the true faith. In the Statute of Ecclesiastical Courts, published by Vladimir the Great, himself the first Russian ruler to be baptised, *zeliénitchestvo* is declared to be a specific crime, and as this term appears to have meant the use of *zelié* or simples, the clause was probably a blow aimed at the heathen professors of medicine generally. But the lay art did not die easily. The seers and the system they represented were too firmly rooted in the country and in the hearts of the people to be eradicated in a day. It may even be questioned whether they have ever become quite extinct. The "grey-haired *Koldoun*" may no longer exist as such, but in all essentials he is alive to this day. The *znakhar* and *znaknarka*, the "wise man" and "wise woman," to whom the Russian peasant still turns in cases of illness and misfortune, are the direct representatives of the ancient wizards and sages of the time of Vladimir. They are still believed to possess a mysterious power and skill in the healing of disease, and there is still a widespread faith in the superior virtues of their wonderful simples over all the drugs in the Pharmacopœia.

It will have been noticed from the story of Agapit and the Armenian that so early as the eleventh century a class of foreign practitioners was in existence in Russia. In that and the following centuries incidental mention is not infrequent of foreign physicians and their treatment. It has been conjectured that they came from Byzantium and possibly also from Arabia. These lay practitioners were of no little repute. They were to some extent opposed by the monks, but they were powerfully protected. The princes and *boyars* preferred their services to those of the monks, which they left to the lower classes. The monks always refused payment for their treatment, but the laymen were paid and apparently well paid. In the oldest code of Russian laws in existence—that of Yaroslav, compiled in 1018—a person wounded in an assault, in addition to receiving three *grivnas* compensation from his adversary, was entitled to one *grivna* for the practitioner's fee. A *grivna* was the third part of the price of a horse in those days. Of the nature of the medical practice at that time and of the remedies employed almost nothing is known. Surgical interference in certain cases was, it seems, sometimes resorted to. In 1076, two days after Christmas Day, Prince Sviatoslav[3] died from the "cutting of a tumour" or of some form of local induration or swelling. Very much later a certain Prince Dmitri was treated for bleeding at the nose by means of plugging the nostrils. Hospitals, or rather infirmaries for the disabled, were also in existence, and mention is made in 1091 of a bathing establishment in Pereyaslavl, though whether for medicinal or merely for cleansing purposes is not clear.

Early in the thirteenth century Russia was conquered by the Tatars, and during the next two and a half centuries of rapine and war there was of necessity almost complete cessation of the practice of the peaceful arts. Such medical art as there was at this period was entirely in the hands of the monks, who were generally spared by the Tatars. This miserable period came to an end in the time of Ivan the Third, whose reign from 1468 to 1505 is an important one in many ways. He was the first Russian ruler who took the title of Czar. He married the Byzantine princess Sophia Paleologos, and in her suite there came to Russia many refugees from the capital on the Bosphorus, which had only recently fallen into the hands of the Ottoman Turks. The result was a general revival in Russia of all the arts—a revival for which the overthrow of the Tatar supremacy had paved the way, and which was still further stimulated by the advent of the more cultured Byzantines. Among the arts which shared in the renascence was that of medicine. Foreign physicians were invited to settle in Moscow, which had long before become the capital, and several did so. Presumably some high inducement was held out to attract them; for to enter the service of the Russian autocrat of those days was to run no little personal risk. The fate of the first two foreign doctors who arrived in Moscow could scarcely have been encouraging to those who followed. Their histories are worth quoting briefly.

The first to enter the service of Ivan was one Anthony, a German, who came to Moscow in 1483. He was in high favour with the Prince, but even that could not save him. Only two years after his arrival he was ordered to treat a Tatar prince who was then in Moscow. He failed to cure him, and, in accordance with what seems to have been the pleasing custom of the age, was handed over to the relations of the dead prince to be dealt with at their will. The Tatars dragged him to the banks of the Moskva River, and there "cut his throat with a knife like a sheep!" Five years later Master Leo,[4] a Venetian Jew who with other artificers had been brought to Moscow through the Byzantines, was commanded to treat the son of the Grand Duke himself. He was rash enough to pledge his own life that the prince should recover. The patient had some affection of the legs; Leo gave him his simples and applied poultices and hot bottles, but with no avail. The disease got worse and the prince died. The unfortunate practitioner was thrown into prison, and six weeks later was publicly executed. The people considered his death a just one; he had deceived the Czar and had brought his fate on himself—a statement, it must be confessed, not without some element of truth. It was not always easy for those who had once entered the Czar's service to leave it. The murder of the German doctor, Anthony, created a panic among the other foreign craftsmen. Aristotle Fioraventi, the famous Venetian architect, designer of coins, caster of cannon and of bells, who rebuilt the beautiful Cathedral of the Assumption as it now stands in the Kremlin in Moscow (the same cathedral in which the present Czar was so recently crowned), when he learned of the murder, begged to be allowed to return to his own country. But his request so enraged the Grand Duke that he put the unfortunate man under arrest in his own house and confiscated all his goods.

[3] Professor Zagoskin by an obvious slip says Sviatopolk.

[4] The title of Master appears to have been usually applied to Jewish doctors in the Middle Ages, as they were excluded from bearing the title of "Doctor."

In the following reign, that of Vassili IV., a Russian subject named Theophil was taken prisoner in Lithuania and carried to Moscow. There he began to practise medicine, and with such success that when in 1516 the margrave in whose service he had formerly been demanded his return the Russian prince refused to let him go. To a like request two years later the prince answered: "He has many of the nobles on his hands under treatment; besides he has already a wife in Moscow." In this case the foreigner had, it seems, become quite at home in his new surroundings and did not himself wish to leave. Nineteen years later he was still in Moscow, for in 1537 he was ordered to make a medical examination of a certain princeling who had refused to enter the military service on the pretext of illness. Two other names stand out at that period, those of Marco, a Greek, and Nicolo, a native of Lübeck. The second is described by the imperial ambassador, who visited Moscow in 1518, as "Maestro Nicolo Lubacense, professor di medicina et di astrologia et di tutte le scienze fondatissimo." This professor of all fundamental knowledge treated the Grand Duke in his last illness, but of his other exploits almost nothing is known.

III.

The Reign of Ivan the Terrible.—Alien Physicians in Russia: their Diplomatic Positions.

WITH the accession to the throne of Ivan IV.,[5] better known as Ivan the Terrible, begins a period in the annals of Russian medicine of much greater interest to Englishmen than those hitherto described. The story of the relations between England and Russia in the middle of the sixteenth century has often been told, and it is not proposed to go over that well-trodden path again here. The voyages of Chancellor and Willoughby, the "discovery" of Archangel, the foundation of the Russia Company, the establishment of diplomatic and commercial relations between London and Moscow, and the abortive attempt of the Czar Ivan the Terrible to bring about a still closer union of the two countries by marrying an Englishwoman—all these are matters known to everyone who has the slightest acquaintance with the course of Russian history. What is not so generally known is that an important part in these events was taken by the English physicians or medical practitioners who were invited or sent to Moscow from London at that time. Many of the numerous letters which passed between the Czars Ivan and Feodor on the one hand, and the Queens Mary and Elizabeth on the other, are taken up with the important subject of the choice and despatch of a trusty body-physician for the service of the Russian autocrat. And the men who entered this service—one that was still not without its perils—were not only men of high professional attainments but were something more than physicians. In many cases they were trusted diplomatic agents who carried on important and delicate negotiations between the two countries. In those days, when there was no resident ambassador of the one Court at the other, but only occasional missions for some special purpose, it was obviously of great advantage to an English statesman to have an intelligent, educated, and observant person, such as a physician would be, residing at the Russian Court, and ready and able to keep him in touch with all that was passing there. Nor were the English statesmen of the time slow to take this advantage; not only in the case of physicians, such as Mark Ridley or Jacob, who were duly accredited from one Court to the other, but even in the case of those who entered the Russian service privately, such as the scoundrel Bomelius, whose story will be told presently.

The first Englishman who went to Russia to practise medicine appears to have been Dr. Ralph Standish. Unfortunately but little is known of his career. He had graduated M.D. at Cambridge in 1553, and had been licensed by the College of Physicians to practise for one year only in November, 1556. In 1557 he sailed for Russia with the famous Antony Jenkinson, the first English ambassador at the Muscovite Court. He reached Moscow, but of his experiences there and his ultimate fate no traces are left. Contemporary with him was a certain Italian practitioner, named Arnolfo Linsœus, who appears for one moment only on the page of history. He was summoned to attend the victim of one of the Czar's jests. Ivan had given one of his boon companions, a Prince Gvozdef, some scalding soup to drink, and when the prince tried to run away he struck him with a knife and wounded him so severely that he fell to the ground covered with blood. Arnolfo was sent for. "Cure my good servant there," said the Czar, "I have been playing with him rather carelessly." "So carelessly," answered the doctor, "that perhaps God and your Majesty will raise the dead, for the breath has already gone out of his body." The Czar waved his hand, called the dead man a "dog," and went on with his amusements.

An incident such as that just narrated throws a lurid light on the character of the times and of the ruler who subsequently earned the title of "The Terrible," though, like all isolated incidents, it shows but one side of that curiously complex personality, in whom good and evil had a prolonged struggle for the mastery, but in whom the final triumph of evil was so complete that what good there was in him has been almost altogether lost sight of in the memory of his crimes.

Ivan the Terrible has not infrequently been compared with King Henry VIII. There seems, however, little to justify the comparison, save that each had a particularly strong will and each married six wives. The Russian, unlike the English ruler, was on the point of marrying a seventh, or, to speak more strictly, was negotiating a seventh marriage, when he died. Had he lived it is doubtful if the marriage would have taken place, for the English lady whom he asked to share his throne was not over eager to leave her own country, and seemed to think that the perils and drawbacks of becoming wife to a man like the Czar were fully as great as the attractions of an Emperor's crown. The negotiations for this match are closely associated with the names of two medical men of widely opposite characters and careers, the physician-ambassador, Robert Jacob, and the miscreant Bomel. It is sometimes stated that Ivan IV. made a proposal of marriage to Queen Elizabeth herself. But this was not the case. The idea was suggested to him, but it was not probable that he seriously entertained it as a practical possibility. The suggestion is said to have been made to the Czar by this same Bomel, a good-for-nothing Anglo-German, the story of whose eventful career is not unprofitable reading. This man, Eliscœus Bomelius in full, was the son of a Lutheran preacher and was born at Wesel in Westphalia. He was sent to England and educated at Cambridge, where he graduated as Doctor of Medicine. At this time his evil propensities had not shown themselves, and he was well received by the English reformers, to whom he had letters. Melancthon is said to have praised him highly for "erudicion and godlynes." After graduation he went to London and soon gained a high repute as physician and astrologer. "People resorted to him to be cured of their sicknesses, having a wonderful confidence in him and in his magic." He even gained the ear of Sir William Cecil, who is said to have consulted him as to the probable length of the Queen's life during one of the negotiations for her marriage. In 1567 Bomel was arrested at the instance of Dr. Thomas Francis, the President of the College of Physicians, for

[5] Reigned 1533 to 1584.

practising medicine without licence from the College, and was thrown into the King's Bench Prison. There he lay for a couple of years, writing to Cecil vindictive letters, in which he spoke of Francis's ignorance of astronomy and Latin, while petitioning Cecil and later Archbishop Parker for his release. The Archbishop wanted to send him abroad, but Bomel gained time by concocting a tale that he had an important secret to divulge—that he had knowledge of a great danger hanging over England. The Archbishop, suspecting a conspiracy, passed him on to Cecil. The important secret proved to be nothing more than the vague statement that, as great revolutions occur every 500 years, and as that time had passed since the Conquest, something terrible might be expected to happen shortly. Cecil treated the author of this rubbish with the contempt he merited, though, as has been remarked, if his "prophecy" had come only a few years later, at the time of the Armada, his fate might have been a different one. As it was, he accepted a most opportune offer to join the suite of the Russian ambassador Savin, who was then in England and on the point of returning to Moscow. Late in 1570 he was settled in the Russian capital. The English ambassador, Jerome Horsey, who began his travels in 1572, frequently met Bomel; he found him living in great pomp and luxury at the Court of Ivan, with whom he was in great favour as a magician. According to the Russian historian Karamzin he was for a time the Czar's evil genius, poisoning his mind against the *boyars* or nobles, foretelling rebellions, and prompting him to some of his worst persecutions. But Nemesis overtook him at last. The wicked doctor, together with the Bishop of Novgovod, was discovered in treasonous correspondence with the kings of Sweden and Poland, with whom Russia was then at war. His dreadful fate cannot be better told than in the pregnant words of Horsey, who was in Moscow at the time. "The bishop, upon examination," he writes, "confessed all. Bomelius denied all, hopinge to fare the better by means of some of his confederates, as it was thought, favouretts neare about the Kinge, whome the Emperor was appointed to attend his son Charowich [Czesarévitch] Ivan; to examine the said Bomelius upon the racke; his arms drawen backe disjointed, and his leggs stretched from his middell loynes; his backe and bodie cutt with wyer whippes; confessed much and many things more than was written or willinge the Emperor should knowe. The Emperor sent word they should rost him. Taken from the *pudkie* [or rack] and bound to a wooden pool or spitt; his bloudye cut backe and body rosted and scorched till they thought noe liff in him; cast into a slead, brought thorow the castell; I preste among many others to see him; caste up his eyes naminge Christ; cast into a dungeon and died there. He lived in great favour and pompe; a skilful matimitician, a wicked man, and practicer of much mischieff. Most of the nobles were glad of his despatch, for he knew much by them. He had conveyed great ritches and treasure out of the country by way of England to Woesell in Weostvalia, where he was bowrn, though brought up in Cambridge. An enymie alwaies to our nation. He had deluded the Emperower, making him belive the Quen of England was yonge and that yt was very feacable for him to marrie her, whereof he was now out of hoep." One turns with a shudder from this hideous picture of suffering. The wretched man's widow, an English-woman, remained in Moscow until 1583, when the English ambassador obtained leave for her to quit the country and return to England. His reference to the matter is very brief. "Obtained leave," he writes, "Jane Ricards, the widow of Doctor Bomelius, who for treason with the King of Pole against the Emperor was roasted to death at the city of Moscow in the year 1579."

A very different man was Dr. Robert Jacob. The Czar wrote to Queen Elizabeth in 1580 asking her to send him an experienced physician, and the Queen recommended Dr. Jacob, or Jacobi, one of her own body-physicians; not, as she stated in her reply to the Czar's letter, that she herself had no need of him, but because her "brother in the blood," as she called the Czar, required him. Jacob seems to have been a man of considerable attainments. He was a native of London and a graduate of Basle and of Cambridge.[6] It was in 1581 that he sailed in a fleet of merchantmen which Jerome Horsey was conducting from England to Russia. On arriving in Moscow he was for some time maintained by the Russia Company, until the Czar gave him a regular stipend. Jacob was not long in Russia before his influence was felt at the Court of Ivan. Some slight trace of conscience, it may be supposed, was still left to that extraordinary person. After committing on his people a series of atrocities of a nature which a few years ago would have been known as "Bulgarian," but which in future will perhaps be more familiar as "Armenian," he appears to have felt, if not remorse, at least a fear that the people would rise and avenge their wrongs upon the author of them. This, quite as much as the expectation that political advantages to Russia would follow, made him anxious to find an ally in England. His relations with Elizabeth were already of the most friendly character, and he had already secured her promise of welcome and protection if he should be forced to fly for safety from his own subjects. But he now proposed to form a new bond of union between the two countries by marrying an English-woman. The fact that he had two wives living at the time was no obstacle to the autocrat. One had already been put away, and the second could be forced into a nunnery. So he turned to Dr. Jacob, who, in addition to being a physician, acted much as an ambassador from the English Court, and asked him to recommend a *nevièsta*, maid or widow, worthy to share the Imperial throne. The doctor mentioned the name of Lady Mary Hastings, the daughter of Lord Huntingdon, and related on her mother's side to Queen Elizabeth. He so dwelt upon the charms of this lady that he quite captivated the imagination of the Czar, who, doubtless, was also not unmoved by the fact that the proposed bride was nearly related to the Queen. The result was that Ivan at once despatched a special ambassador to London with instructions to arrange conditions for a close Imperial union between England and Russia, and to see the Queen privately and tell her as a secret of the Czar's wishes as to marriage. He was also to see Lady Mary Hastings and report to the Czar whether she deserved the eulogiums that Jacob had passed upon her. The man chosen for this important mission was Theodore Pisemski.

It is beyond our province here to tell the story of Pisemski's mission, of his interviews with Elizabeth and the delays under various pretexts before he could see the bride-elect. She, poor creature, was only just recovering from the small-pox, which had destroyed her beauty for ever. Pisemski reported to the Czar as he had been commanded to, but his report was a mere inventory of the lady's features—about as graphic as the description of the person on a modern Russian passport. It contained not one word in praise of her beauty or personal charms. The Queen was also very doubtful of the effect which the sight of Lady Mary's scarred and disfigured face might have upon the Czar. The person most concerned, the Lady Mary herself, at first favoured the idea of the marriage, but her view altered when she came to know more of the man she was asked to marry and of the country she was invited to share in ruling. Pisemski consequently returned to Russia in 1583, having failed in this

[6] He was a Fellow of Trinity, took his A.B. in 1569, and A.M. in 1573. He then went to Basle, where he graduated M.D., and was incorporated on that degree at Cambridge in 1579. In 1585 he became Licentiate of the College of Physicians, and Fellow in 1586.

part of his mission. He was accompanied by an ambassador from Elizabeth, the famous Jerome Bowes, who was instructed to settle all matters commercial, political, and secret then pending between the two countries. Bowes is described as a man rough in his manner and obstinate—one who in his first word showed himself determined not to yield a point. This mission was beset with difficulties, but it was brought to an abrupt end by the illness and death of the Russian autocrat. Ivan the Terrible, living up to his name to the last moment, died on March 18th, 1584. His faults are known to all. Let one small fact, infinitely minute in the balance though it be, be placed to his credit here. While his own subjects were groaning under the most monstrous tyrannies the world has ever seen, while the foreign merchants, and even the foreign ambassadors at his Court, were frequently subjected to the grossest indignities and even dangers, his English physicians were for the most part treated with respect and justice. If the fact be but a small palliation of the tyrant's crimes, it is a proportionally great tribute to the moral worth of those who met with such exceptional treatment.

Of the physicians at the Russian Court during the reign of Ivan the Terrible Robert Jacob was by far the greatest. Of the others scarcely more than their names remain. Ralph Standish, Richard Elmes, Reynolds, Richert (or Richard), the apothecaries Thomas Carver[7] and James Frencham—these are a few of the Englishmen whose names the records of the time have preserved. Only one (the last named) has left any more permanent mark in history. Frencham is said to have founded the first *Apteka* in Russia—a peculiar and important institution to be described more fully later. Jacob returned to England very shortly after the death of Ivan, but was again sent by Elizabeth to the new Czar Feodor, who required a skilled obstetrician to attend the Empress Irene in her confinement. Neither Jacob nor the midwife who was sent with him, however, reached Moscow, the practitioner returning to England and the midwife being detained for some obscure reason at Vologda for over a year. But the Czar soon wrote again to the Queen begging her to send him another physician. Elizabeth wrote in reply to Boris Godunof, the Master of the Horse to the Czar, who later himself sat on the Russian throne:—"And whereas wee were advertised by our marchands that your lordship was desiry to have an English physician to be sent over for the service of the Emperour, and having byn also moved and solicitted by our Cheife Councellor and Lord High Treasurer of England, William Lord Burghley, to send over one of our owne Doctors of Physick, commended by us to His Matie, wee, applying ourselves and being willing and ready to assent, either to this or to any other thing that may lyke His Matie, have appointed Mark Rydley, one of our Physicians, to undertake this voyage and service, *a man learned and expert in his profession* and fitt for the service of a Prince, who being required hereunto by us, upon notice had of your Lo. desire and estraverged from hi;

FIG. 3.

MARK RIDLEY.
Missus ab Elisa Ruthensis quinque per annos Anglis ni desis te vocat illa domum. Tute Mathematicis clarus magnetica calles Pœonias laudes doctus ubique capis.

[7] Carver went to Russia in 1567. He perished in the house of the Russia Company in Moscow, which, with nearly the whole of the rest of the city, was destroyed by fire by the Tatars on Ascension Day, 1571.

country, wee do *commend* to your honourable favour to be protected and graced by your Lo. *according to the quality of the man*, whom we doubt not but your Lo. shall find to deserve your good lyking and favour." Mark Ridley,[8] the doctor mentioned in this letter, was the son of an English clergyman. He was a Cambridge graduate and Fellow of the College of Physicians, and a learned authority on magnetism, a subject upon which he published several works. He stayed at the Court of Moscow for about four years, until the death of the Czar Feodor in 1598, when he returned to England. He seems to have held a high position in his profession, being Censor of the College of Physicians on eight occasions and treasurer twice. He died in 1624.

After the death of the Czar Feodor the Russian throne was occupied by Boris Godunof, who is generally called a usurper. It is true he had no royal blood in his veins, but Elizabeth recognised him, and three months after his accession wrote him a letter of congratulation on his selection by the Russian people, in which she gave him all the full and numerous titles of a Russian Czar. It was in this letter that she asked him to "grant lycence" to Mark Rydley, "our subject, Physician to the late Emperour, to returne him hither to his natyve country, for that they have shewed us that dyvers causes nearly concerning his private state doe require his being here and cannot be ordered without hym." A year later Boris Godunof, who probably missed the services of Rydley, wrote, just as his predecessors had done before him, to Queen Elizabeth, requesting her to send him an English physician On this occasion the negotiations were not quite so successful as before, though not from want of goodwill on the part of the English Queen, nor from any professional disqualifications on the part of the doctor she selected. This was Dr. Thomas Willis, who must not be confounded with his more distinguished namesake, the famous Oxford professor and physician to Charles II. The Dr. Willis of Elizabeth's time went to Russia with the Queen's warmest recommendations, but unfortunately she at the same time gave him some instructions of a political character. This was quite enough to rouse the suspicions of Boris, who did not feel himself very firmly seated on the throne and was ready to scent danger in the most trifling circumstances. He determined, therefore, not to receive the English doctor, but in order to avoid offending the Queen he had recourse to a little diplomatic subterfuge. He arranged that the foreign doctor should undergo an examination as to his knowledge and fitness to practise before being allowed to settle in Moscow. This earliest of medical examinations held in Russia was entrusted to Shtchelkalof, the Russian Chancellor, an official with notorious anti-English prejudices, who carried through the farce admirably. "You call yourself a doctor," he said to Willis; "but have you any doctor's diplomas, or doctor's books, or healing herbs with you?" "All my doctor's books and herbs I left behind me at Lübeck," answered the doctor, "in order to hurry on here." "And how do your recognise sicknesses in man; by the water or by the pulse?" "One does not need books to tell diseases," answered Willis. "A slight malady one tells by the water and a severe one by the pulse. Besides," he added, "I *have* a grand book of medicine with me; it is here, in my head," and he rapped his forehead as he spoke. The examiner was, of course, not satisfied with these answers, and the rejected doctor was sent back to his native country. He was apparently the only English medical man who went to Moscow during the usurper Boris's reign. After the death of Boris in 1605 political affairs in Russia became of a highly complicated character, although it is unnecessary here to follow the fortunes of the false Dmitris and the Shuiskis, pretenders who held the throne of Moscow for periods to be reckoned by weeks or days, or the fluctuations of the never-ending wars between Russia and Poland, during which affairs in Russia were almost as chaotic as during the period of Tatar invasions three centuries earlier. These troublous times—*Smutnuia Vrémeni*, as they are well named in Russia—came to an end in 1613, when something like order was restored by the election to the throne of Michael, son of Philaret, the Metropolitan of Moscow.

[8] Mark Ridley, or Rydley, was the son of Lancelot Ridley, the rector of Stretham, near Ely, where he was baptised in 1559. He was at Clare College, Cambridge; graduated A.B. in 1580, A.M. in 1584, and was admitted L.C.P. in 1590; took his M.D. Cantab. in 1592 and F.C.P. in 1594.

IV.

The Accession of the Romanoffs.—The Aptekas and the Aptekarski Prikaz or Ministry of Medical Affairs.—Foreign Medical Men in Moscow of the Sixteenth Century.

THE accession of Michael, the first of the Romanoffs, is an important epoch in Russian history, and as many readers of these notes may be unacquainted with the general outline of that history it may help them to "fix" this epoch by adding that Michael was the grandfather of Peter the Great, and that he reigned from 1613 to 1645. But the main importance of his reign in the present connexion is that during it was organised a very remarkable institution—a Ministry of Medical Affairs—of interest not only in itself, but also as being the germ whence sprang the present highly organised medical bureaucracy which now exists in Russia.

Each of the various departments of Government in Russia in the seventeenth century was known as a *Prikaz*, a word which, in the sense in which it was then employed, is now obsolete, but which may be translated as a Ministry. Among the various Ministries, not the least important appears to have been the *Aptekarski Prikaz*, or Ministry of Affairs relating to Medicine. The exact date of its institution is not known. Some ascribe it to the end of the sixteenth century. It was certainly in existence early in the seventeenth century. It seems to have been a development of another institution, the *Apteka*. This was at first merely the central store for the distribution of drugs to persons about the Court of Moscow. It was founded about the year 1581 by one of the numerous English apothecaries who entered the Czar's service. Of this Englishman, unfortunately, not very much is known. His name was James Frencham,[9] and he seems to have gone to Russia at the same time as Dr. Jacob, whose career has already been sketched. He was certainly in Moscow in 1581, when he instituted the Court *Apteka;* then he seems to have returned to England, but twenty years later he is the subject of quite a series of letters between Queen Elizabeth and the Czar Boris Godunof, showing that he again desired to join the Czar's service. Accordingly, in 1602, after an unusually long delay on the road, he again arrived in Moscow, this time with his wife and family, and a whole supply of drugs, of which, fortunately for the curious in such matters, a list is preserved. Whether Frencham had anything to do with founding the *Aptekarski Prikaz* is not clear. All that is known is that it grew in some way out of the *Apteka*, which he is known to have founded. The *Prikaz* was organised in exactly the same way as the other Ministries. One of the highest *boyars* or nobles was always at the head of it. Thus in 1637 it was under a Tcherkasski, in 1642 under a Sheremetief, and in 1662–88 under a Miloslavski. Let us glance for a moment at what constituted this seventeenth century Ministry of Medical Affairs.

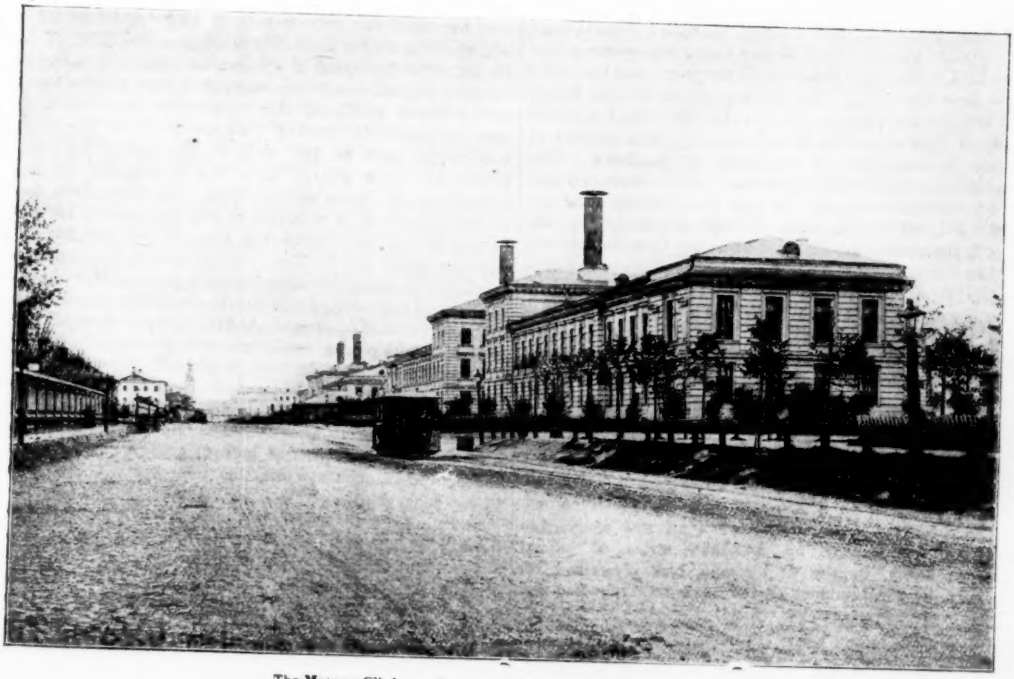
Apart from the clinical staff the members belonged to the following six groups: 1. Doctors—i.e., physicians. 2. *Lékars*—i.e., surgeons. 3. *Aptekars*—i.e., apothecaries in connexion with the Court *Apteka;* under them were

[9] The Russians renamed him Jacob Astafief.

FIG. 4.

The University of Moscow: The new University Buildings.

FIG. 5.



The Moscow Clinique: General view from Great Tsaritzyn-street.

alchemists, distillers, pupils, and *travniki*, or persons who collected *travni*, or healing herbs. 4. Oculists. 5. Barbers, blood-letters, bone-setters, and undertakers. 6. Clock-makers, who for some reason were attached to this Ministry.

The income of the Ministry was derived mainly from two other Ministries—those of the Grand Palace and of the Grand Treasury. For a time its history is merely that of the old *Apteka* from which it had sprung. Later a second *Apteka* was founded, and the two were known henceforth as the Old and the New. The Old continued to serve out drugs only to the Czar, the Court, and to more distinguished foreigners. The New *Apteka*, however, was allowed to sell medicines and other things to the troops and to private individuals, and it was even ordered to take concern for the health of the citizens and for the prevention of infectious diseases. So that as early as the middle of the seventeenth century there was the nucleus in Russia of a Public Health Service. In the following pages the stages in history which connect those early beginnings with the present system which prevails in that country will be briefly indicated. But before doing so a little more has to be said about the Old and New *Aptekas*.

It is tempting to dwell on those still early days, when the first rays of western civilisation were beginning to dawn on the Muscovite Empire, but before Peter had forcibly flung open his famous "window that looked to the west," and which let in, with much-needed light and air, some other elements less desirable. It is a fact perhaps not generally recognised that before the great Reformer's time Russia had not only begun to look to the west and to adapt herself to western ideas of civilisation and development, but had also begun to advance on lines of her own. Thus the *Aptekas* just described, although founded by an Englishman, appear to have been thoroughly Muscovite institutions and were not modelled on any similar institution in another country. Thanks to the reprint by the present Russian Medical Department [10] of the books and documents of the *Aptekarski Prikaz*, we can form to ourselves a complete picture of these institutions and their working. We learn not only the accepted medical traditions of the time and country, the names given to their ailments and the drugs used to cure them; but we can gather some idea of the social condition of the people and the social ideas then prevailing. We see one *Apteka* for the *boyars* and one for the common people; we can read the abject petitions (the abjectness doubtless more than formal) of private persons desiring treatment or medicine. One Theodore Baranof has his right hand nearly blown to pieces by an arquebuse and humbly begs the privilege of a surgeon's aid, which the Czar Michael graciously permits. Here is the ceremonial observed when the Czar himself had to take a dose of medicine. A special set of drugs was kept for His Majesty in a separate room, locked and sealed by the secretary of the *Prikaz*. Without his consent no one, not even the imperial medical men and apothecaries, could enter the room. The drugs were kept in sealed bottles and boxes. The prescription written by the medical man was first submitted to the *Prikaz*, who entered it in their books, and was then presented as a *skazka*, or official paper, to the Czar, who gave the order for its preparation. It then passed to the *Apteka*. Here only the most trusted medical men and apothecaries took part in the preparation, working in a separate room to which no one else had access. And now, when all was ready, the medicine was tasted by a whole series of official persons: firstly, by the doctor who had prescribed it; secondly, by the president of the *Aptekarski Prikaz*; and lastly, by the high Court official who carried it up to the Czar. Dr. Rosenburg, body physician to the Czar Alexis (Peter the Great's father), relates that he once had to swallow the whole bottle of medicine which had been prepared for the Czaritza, simply because it had caused some nausea to the high Court lady who had tasted the stuff before presenting it to Her Majesty. We are not told the result on the physician. Not only were medicines provided by the *Aptekas*. Not long after their foundation they are found furnishing the Patriarch of Moscow with "ten pounds of good amber" for the preparation of the chrism. At other times they sent to the palace aniseed, molasses or other aromatic substances for the making of *vodkas* or strong drinks, and in 1707 they provided paints and varnish to paint the imperial yacht at Voronezh.

Of the medical practice of the time, with its poly-pharmacy and its use of curious and sometimes very rare and costly drugs, not much need be said here. The recipes and lists of drugs correspond closely with the same things in contemporary medical books in other countries. Occasionally strange remedies are met with. By great good fortune a complete inventory is preserved of the contents of a travelling medicine chest which was prepared for the Czar Alexis on the occasion of one of his journeys to the Great Monastery of the Trinity, some forty miles from Moscow. In the list of oils, elixirs, essences, syrups, salts, plasters, and powders, there occur a "syrup of colts' hoofs," [11] a "spirit of worms," another of ants, and a balsam of "unicorns' horns." The horn of a unicorn was a most highly esteemed remedy in those days. Sometimes fabulous prices were not only asked but given for even a piece of a horn. For instance, in 1655 a foreigner brought to the *Prikaz* in Moscow three horns which he declared to be those of unicorns and offered them for sale at the enormous price of 10,000 roubles.[12] Dr. Graman, a physician who had studied at Jena, Leipzig, and Wittenberg, gravely reported upon these horns to the *Prikaz*. He declared that they were undoubtedly what they professed to be, and that two of them were extraordinarily fine specimens, and he therefore proposed that for these two alone a sum of 5000 roubles should be offered. The *Prikaz* ultimately decided to offer 5300 roubles for all three horns, but if the vendor refused to take less than the original sum, to pay that rather than lose the horns. The ultimate result of this bargain is not stated. It may be noted in passing that the price of the horns was to be paid at the wish of the vendor in sable skins and other peltry. This was a frequent medium of exchange in Russia at that time. The therapeutic uses of unicorn's horn, or whatever it was that passed for it—it was in all probability the horn of the rhinoceros—were numerous and varied. It was mainly apparently a prophylactic, invaluable against fevers, pestilences, and even the bites of serpents. According to Dr. Belau (physician to both the Czars Michael and Alexis) it was "a certain protection against plague, small-pox, and dysentery." He had sufficient belief in it to take it himself, at least on one occasion, when he swallowed a dose of twelve grains in two tablespoonfuls of hot Rheinwein, taking measures to encourage diaphoresis after the dose. He was the fortunate possessor of a small piece of horn weighing a quarter of an ounce, and in exchange for this he asked not less than twenty sable skins.

No little store was also laid by certain magic stones. The same Dr. Belau offered the *Prikaz* a whole collection of such stones. One of these if worn near the kidneys cured renal complaints; others had only to be soaked in water and the water acquired marvellous healing powers in disease of the

[10] Richter, whose work on Medicine in Russia has usually been the leading authority for this branch of history, was deprived of the use of these documents, as he believed they had been destroyed in the burning of Moscow in 1812. They were, however, safely preserved among the archives of the Ministry of the Interior.

[11] Possibly, of course, a plant of that name.

[12] Equivalent to at least 60,000 roubles, or over £6000, at the present day.

eyes; yet another had a wonderful influence over pregnant women, for if worn round the neck of the woman it gave strength to both mother and child. In fact, there was scarcely a disease or a part of the body which had not its own particular magic stone. Few of the drugs used at that time were of native production. They came from Germany, Holland, or England. English merchants trading to Archangel found a ready market for such goods, and in addition the foreign medical men who came to Moscow always brought a goodly supply of drugs with them. The list of drugs already mentioned, which Frencham, the English apothecary, took with him, contained the names of no less than 164 different substances or preparations. Later efforts were made to develop the native resources. *Travniki*—that is to say, collectors of *travni*, or simples used by the peasants, were appointed by the *Prikaz*. The enormous tracts of Siberia were laid under contribution. The Siberian *voyevods*, or military governors, were ordered to make local inquiries as to the herbs of popular repute in their district, and to send samples of such as were used to Moscow. The record remains of the appointment in 1669, by the governor of Yakutsk, of an official named Epishef who travelled for two years on a botanical excursion, and published on his return a brief description, still extant, of the herbs he had collected and their uses—a sort of miniature Siberian Pharmacopœia of the seventeenth century. Later in that century attempts were made by the *Prikaz* to cultivate medicinal plants in botanical gardens in and around Moscow itself. The word "*travniki*" was also applied to certain popular manuscript books which described the nature and properties of the herbs and simples in common use. The descriptions in these books are a curious mixture of common sense and superstition. The one most commonly appealed to was known as the *Leitchebnaia Kniga*, or Book of Treatment, a translation from the Polish, which treated of simples, of distillation, of tinctures, of precious stones, of philosophical knowledge, of blood-letting, of the apothecary's and barber's arts—in fact, a sort of epitome of the medical knowledge of the time, addressed as much to the careful housewife as to the professional apothecary. An original copy of this book perished, with innumerable other valuable manuscripts, in the great fire of 1812.

Meanwhile, the stream of foreign medical practitioners continued to flow to the Russian Court. During the reign of Michael eight physicians, five *lékars* or surgeons, and four apothecaries entered his service. In the reign of his son and successor, Alexis, the numbers were larger, though the reign was shorter by a year; eleven doctors, three *lékars*, six apothecaries, and one eye-doctor entered his service. In Feodor's brief rule of five and a half years (1676 to 1682) four doctors, nine *lékars*, and six apothecaries came from abroad to Moscow. Feodor was succeeded by his half-brother, Peter the Great, whose reign must be reserved for more detailed treatment, but it may be noted here that in the first seventeen years only of his reign as many as eleven doctors, eighty-seven *lékars*, one eye-doctor, and nine apothecaries arrived in Russia. It is impossible here, and would serve but little purpose, to name even a fraction of these numerous foreign practitioners. But a few names undoubtedly deserve mention. Indeed, it is a remarkable fact, upon which it is well to insist, that the majority of the foreign medical men who went to Moscow in the sixteenth and seventeenth centuries were men of considerable standing. They were by no means the scum of the profession in other European States or adventurers who, having failed in their own country, were playing pitch-and-toss with Fortune in a new one. On the contrary, they were nearly all men with good university degrees, and provided with recommendations from their own sovereign to the Russian ruler. Without some such recommendation they would not have been accepted at Moscow. It was impossible for a private individual to make his way to the Russian capital and then start practice. To begin with, such was the state of the roads that without an *opasnaia gramota*, or letter signed by the Czar guaranteeing a safe journey, he could never have reached Moscow alive. If by a miracle he had reached the capital he would at once have been arrested, and then the best he could have hoped for would be a safe escort to the frontier. On the other hand, those who came with proper credentials were treated with every consideration. Let us, for example, try to follow the fortunes of an English medical man invited to Moscow about the middle of the sixteenth century. A detailed correspondence on the matter may be supposed to have passed between the Queen and the Czar. This correspondence was sometimes prolonged over several months, or even a year or two. When all was settled to the satisfaction of both parties, the practitioner chosen would probably sail to Archangel in a fleet of English merchantmen belonging to the newly formed Russia Company. Or he might join the suite of an English or Russian ambassador going or returning to Moscow. Having safely accomplished the sea voyage and landed at Archangel, the long overland journey to Moscow would begin—a distance of over 600 miles to be traversed either on horseback or in carriages. To accomplish this safely a passport, the so-called *opasnaia gramota*, was, as already stated, essential. This document sometimes guaranteed not only a safe conduct to Moscow but also, in case the bearer should wish at any future time to go back to his own country, a safe return to the frontier. Journey money was provided and also a fixed daily supply of provisions. Rather more than halfway to Moscow, at Vologda, the party of travellers would be met by a special escort from the Czar to bring them on to the capital. Arrived in Moscow he was assigned a set of rooms or a house, most probably inside the Kremlin. Here the very first act demanded of him was to subscribe an oath of fidelity to the Czar, in which the medical man bound himself most solemnly not to use poisonous drugs, or to do anything by thought, word, or act to the hurt of the Czar or to any member of the Royal family. The fear of being poisoned or bewitched seems to have been constantly present in the minds of more than one Czar, and the precautions taken against such a disaster have already been seen in the description of the ceremony observed when the Emperor required a dose of medicine. It is even said that the Emperors Feodor and Boris Godunof declined under any circumstances to take medicine from their foreign medical men, though they more than once called in *kudesniks*, or wizards (even then not an extinct race), and took their simples readily enough.[13]

After taking the oath, the doctor whose fortunes we are following was taken to the *Posolski*[14] *Prikaz*, or Foreign Office, thence to the *Aptekarski Prikaz*, and finally had an audience of the Czar. Then followed a curious and pleasant custom, though one strongly tinged with orientalism. The Czar sent the new-comer a quantity of handsome presents, technically known as the "presents on arrival." Here is the list of articles sent to Dr. Sibelist, a famous physician in his day, when he arrived in Moscow early in the seventeenth century:—Undefined quantities of velvet, "black and smooth"; velvet of a coarser quality, and satin; two pieces of damask and two of cloth; forty sable skins worth 40 roubles, and 40 roubles in

[13] A tale is told of a *médecin malgré lui* in the time of Boris Godunof, which, if not true, is certainly drolly apposite. The Czar being taken ill a proclamation was made offering high rewards to any person who would cure him. A certain *boyar's* wife, who had some grudge against her husband, scented a fine opportunity for revenge. She went to the Court and stated that her husband knew of a remedy which was a certain cure for the Czar's disease. The *boyar* was sent for and at once questioned as to his remedy. Denials and professions of ignorance were of no avail. He was beaten and threatened with torture and even with death if he did not at once treat the Czar. So the wretched man begged a respite of fourteen days, hoping some *deus ex machinâ* might be forthcoming in that time. During the interval he collected some herbs and some earth from the banks of the River Oka, and as a last resource proposed that the Czar should bathe in an infusion of these. To his surprise and joy the Czar actually recovered after his bath. But the poor *boyar* was not out of his fix yet. It was clear that he had known of a remedy all along, and as he had refused at first to name it he must have wished the Czar to die. So he was beaten within an inch of his life, and then, with a fine inconsistency, as he had ultimately cured the Czar he was dismissed with a reward of 200 roubles and an estate of eighteen serfs, granted him on condition that he did not take vengeance on his wife. The couple are declared to have lived "happily ever after."

[14] From "posol," an ambassador.

money. To his wife were sent at the same time quantities of damask, taffetas and cloth, and forty sables worth 25 roubles; and to his servants pieces of "English cloth, each of the higher servants receiving in addition 8 roubles in money. Even the kitchen-maid and cook were not forgotten, each getting her modicum of cloth. These for the outer person. But the inner man was not forgotten, and numbers of good things were despatched from the Czar's table to that of his new Court physician. The same Dr. Sibelist received three loaves of bread, a quarter of beef, a goose, two ducks, a hare, two woodcocks, a sheep "with the wool on," five chickens, six half-pounds of butter, eight eggs, a flagon of *boyar* wine, two flagons of *romanei* (a kind of sweet wine) and two of Rheinwein; two each of cherry mead, raspberry mead, molasses mead, and another sort of mead; one *vedro* (two and a half gallons) of still another kind, and four *vedros* of "prince's mead"; one *vedro* of "artificial" beer, and two of "simple" beer.

The stipend paid to the foreign physician, if not on so prodigal a scale as the presents made to him on his arrival, was not an ungenerous one. In the time of Boris Godunof a doctor received 200 roubles a year and twelve or fourteen roubles a month. It is not easy to give an exact equivalent of these sums in the money of to-day, but it seems probable that taken together they amounted to a very considerable sum. But in addition to this he was provided with a house, with a monthly supply of bread sufficient for his whole household, and with sixteen "loads" of firewood, four barrels of mead, and four of beer every month. He and his servants were vast consumers of strong drinks. In addition to those just named there came daily to his house from the Czar's kitchen one and a half quarts of *vodka*, the Russian rye spirit, as well as the same quantity of vinegar and a side of bacon. Every day the Royal table furnished him with three or four dishes, each "so heavy that the strongest man could with difficulty lift it." Other material wants were also liberally provided for. Five good horses were sent from the Royal stables for his use, and sufficient hay and straw for seven horses were furnished every month. One still better horse was given him as a saddle-horse, to be used specially when he made his morning visit to the Kremlin and the *Court Apteka*, a visit never omitted in the summer months. Then there was a special horse for sledging in the winter, two horses for his wife "with which to drive to her own church," and a carthorse "to get in the water." To some, if not all, of his foreign physicians the Czar granted a small estate of some thirty or forty "souls"—i.e., serfs. Special presents on special occasions also—such as the successful treatment of a great *boyar*, or *à fortiori* of the Czar himself—were not infrequent. In the latter case he might get a piece of valuable damask or velvet, or forty fine sables as a present. Altogether, the lot of the foreign practitioner who was invited to the Muscovite Court in the sixteenth century was by no means an unenviable one. It had its drawbacks, doubtless, but so long as he kept the Czar's favour he had nothing to fear and was treated as the equal of any *boyar* or noble in the land. It was only by the people that the foreign practitioners were mistrusted, apparently because they regarded them and their strange doings as embodiments of the powers of evil. It would have gone hard with many of them had they not been under the protection of the Czar. On more than one occasion of popular outbursts in the city of Moscow their houses are said to have been the first to be sacked by the mob.

Among the more noteworthy physicians who went to Moscow in the seventeenth century a few have to be named. They were English, Dutch, German, and Italian. In 1621 Dr. Arthur Dee, body physician to King James and later to King Charles, went to Moscow with the King's recommendation, and stayed there for fourteen years. He wrote a treatise while there on the "Hermetic Science," which was published in Moscow, and later in Basle and Paris.[15] After Dee came Sibelist from the University of Halle, recommended by the Duke of Holstein; then, in 1639, Graman, who had studied medicine in Jena, Leipzig, and Wittenberg, and was recommended by the famous Holstein ambassador, Olearius. Four years later came Belau, with the diplomas of Leyden and Königsberg. Samuel Collins, an Englishman, is said to have made a greater name than all his predecessors at the Russian Court. He was the son of an Essex clergyman and a graduate of Padua and Oxford. He was nine years in Moscow, and the year after his death, which took place in Paris in 1670, there appeared a small anonymous book entitled "The present state of Russia in a letter to a friend in London, written by an eminent person residing at the great Czar's Court at Moscow for the space of nine years." There is no doubt that this work was from the pen of Collins. Apparently it was never intended for publication, but was merely a series of private letters addressed to "an eminent Doctor of Physick here in London." The book is quaint and interesting, even if it throws no particular light upon the state of medicine at that period, or the treatment received by the foreign practitioners at the Russian Court.

The name of John Tradescant must not be passed over without brief reference. The true founder of the great Ashmolean Museum in Oxford, which might more appropriately have been called the Tradescant Museum, and the earliest collector of all that is interesting in natural history, he has fallen into quite unmerited oblivion. John Tradescant, generally known as "the elder," to distinguish him from his son, was a Fleming by birth who had settled in London and held the honourable position of gardener to the Marquis of Salisbury and to the King (Charles I.). He had travelled much in Europe, and one of his journeys led him to Archangel in company with Sir Dudley Digges. Digges's expedition was apparently a commercial one, but he only reached Cholmogory, where he had to turn back on account of the Poles. Tradescant seems to have got no further than Archangel; but he made a great collection of natural history specimens and other curiosities gathered in the neighbourhood, and these he brought to London and deposited in his growing museum in his house at Lambeth. "Tradescant's Ark," as the house was called, soon became one of the sights of the town, and was visited by the King and Queen and the highest in the land. The old naturalist died in 1638. The collection, which included specimens of minerals, birds, fishes, insects, plants, coins, medals and all sorts of curiosities, passed to the son and on his death to the grandson, who died in 1659. Having no heirs, this last representative of the family left the museum to Elias Ashmole. Ten years later the University of Oxford offered the degree of M.D. to Ashmole, and about the same time the latter offered the whole Tradescant collection to the University, provided that they would erect a suitable building for it. The Ashmolean Museum, as it was henceforth rather unfairly called, was designed by Wren, and opened in 1683. The name of Elias Ashmole has another claim to mention here, as he published an English translation of the treatise on Hermetic Science by Dr. Arthur Dee, to which reference has just been made above.

Of the medical men of German and other nationalities space will permit no more than the mention of two or three. Rozenberg came to Moscow with the diploma of Königsberg University; Blumentrost was a graduate of Jena; Carbonarius of Grätz; Pelarino of Padua. But with these names, all of which appear at the end of the seventeenth century, begins a new era of medicine in Russia. Peter the Great had already not only come to the throne, but had begun to show the stuff he was made of. The old order was giving way to the new. Among the wonderful reforms, or rather new creations, of his great genius not the least wonderful must rank his successful endeavours to nationalise medicine as he had nationalised the other arts and sciences.

V.

The Early Russian Hospitals and Russian Medical Education.—The Medical Chancellery.

BEFORE the reign of Peter the Great there does not occur the name of a single Russian in the medical hierarchy of the Muscovite Court. There were no means by which a native Russian could obtain a medical education in his own country, and the idea of going abroad to study at a foreign university, even if he had entertained it, was one which possessed no attractions to a Russian of the pre-Reform period. The great reformer himself was the first Czar who left his country for reasons other than warlike; and it is extremely doubtful whether his example alone would have induced others to follow it. Peter was not the man to wait until his example was voluntarily followed. He saw the

[15] Fasciculus Chemicus, abstrusæ Hermeticæ Scientiæ ingressum, progressum, coronidem, verbis apertissimis explicans. Moscow, 1629, 12mo. Dr. Dee was born in 1579 and was educated at Westminster and Oxford. He was a friend of Sir Thomas Browne, who says of him: "He was a persevering student in hermetical philosophy, and with the highest asseverations affirmed that he had 'ocularly, undeceivably, and frequently' seen projection made in Bohemia." He died in 1651.

weakness of the system then prevailing, under which all the medical knowledge in the country was concentrated in the hands of a few foreigners immediately about the Court, while the whole of the nation was left without any instructed medical aid whatever. He not only saw the weakness of the system, but he also saw the remedy. In 1692 he tried an important experiment. He sent one of his own subjects abroad to receive a medical education at a foreign university. The experiment was quite successful. The student chosen was one Peter Vassil'itch Postnikof, the son of a *diak*, or Secretary of State, who had also served as ambassador at foreign Courts. Postnikof went to Padua and returned in four years' time with the doctorates of philosophy and medicine of that famous seat of learning. His first appointment on his return was, however, not a medical one, but that of interpreter in the suite of Russian ambassadors at foreign Courts on account of his knowledge of Latin, French, and Italian. He finally returned to Moscow in 1701, and received some medical appointment (probably in the *Prikaz*) worth 500 roubles a year, but unfortunately he died very soon after. The success of Postnikof induced the Czar to send a second Russian student to Padua—this time at the request of the student's father, who was also a *diak*. Gregory Ivanovitch Volkof obtained his degree, returned to Moscow, and, like Postnikof, was employed as interpreter in the diplomatic service. Peter set him to translate the Jardinage of Quintigny, a French book then much in vogue; but whether as a result of the dull character of the book, or on account of the difficulty of translating it, he fell into a melancholy, and so disappears from the stage of history.

And now, having satisfied himself as to the capacity of his subjects to learn the mysteries of medical science, Peter determined to try a much more important experiment, no less than the foundation of a medical school in Moscow, so that students could obtain the needful education without leaving their own country. The first step towards this end was to build a hospital. Before this time there were no true hospitals in Russia. Institutions which passed for such were really rather infirmaries for the aged and disabled than hospitals proper. It is, however, worth noting that late in the seventeenth century, just before Peter's time, the modern idea of a clinical hospital is almost exactly expressed in a ukase from the Czar Feodor to the *Aptekarski Prikaz*. In this the object of hospitals is defined as "to provide the truly poor man with a means of curing his disease; to assign to hospitals until death those with incurable disease ..... to root out mendicants and those who feign sickness," and as a subsidiary object to provide young medical men with a means of perfecting themselves in the practice of their profession.

The hospital projected in this ukase was apparently never built, and the first institution of the kind in Russia was undoubtedly the Moscow *gofshpital*, the construction of which was begun by order of Peter the Great in the year 1706. It was built in a year; and in 1707 was inaugurated, not only the first hospital, but also the first medical school in Russia. Peter had visited England in 1698, and it is supposed that the new building in Moscow was a copy of a hospital he had seen in Greenwich. It was built from the plans of Dr. Nicolaus Bidloo, a Dutchman, who came to Moscow in 1703, under contract to act for six years as *leib-medik* to the Czar. This really able physician and organiser, who gave himself heart and soul to the task of floating the new institutions, was a son of the famous anatomist of Leyden University, and nephew of the no less illustrious botanist of Amsterdam. Bidloo soon became one of the Emperor's most intimate and familiar friends, but, like many others who were in the service of that energetic and exacting person, he found his health unequal to the strain of constant attendance upon his master, and he had been scarcely a year in Moscow when he became really ill. It was then that Peter asked him to design the new hospital and a medical school to accommodate fifty students—a task which Bidloo most willingly undertook.

It is impossible to more than outline the fortunes and misfortunes through which the hospital and school passed. The building itself—the school and hospital were one—being of wood, was utterly destroyed by fire on more than one occasion, but it was always rebuilt, though not always without grumbling on the part of the ecclesiastical authorities who had to find the funds. For the traditional sentiment which regarded the treatment of the sick poor as a duty of the monastic world was still of sufficient force to induce Peter to lay the burden of building the new hospital on the Monastic *Prikaz*, and of rebuilding it after the fire in 1722 on the Holy Synod—the successor of the Monastic *Prikaz*.

The history of the hospital during the first fifty years of its existence is one of constant difficulties with the church authorities, who grudged the expenditure on an institution over which they had no direct control, from which they derived no benefit, and which was used almost entirely for sick and wounded soldiers. They argued, not without reason perhaps, that the military, rather than the ecclesiastical, authorities should bear the expense. The hospital suffered accordingly. The doctors complained of the shocking state of repair of the buildings and want of room for their patients. The Synod refused to give any more funds and referred the doctors to the Senate; the Senate replied that the Synod, as the direct successor of the Monastic *Prikaz*, which had paid for building the hospital, was bound to maintain it. And so between Synod and Senate the buildings slowly went to ruin. At last, however, the Synod gained its point, and in 1754, on the same day that the Empress Elizabeth signed the ukase founding the University of Moscow, the hospital and medical school passed over to the Military *Collegium*—the War Office of the period. Meanwhile, the *Aptekarski Prikaz* had undergone a series of changes and reformations. In 1672 its name was altered—it became the *Aptekarskaia Palata* or Chamber; in 1714 the word Chancellery was substituted for Chamber; in 1725 it was again re-named the Medical Chancellery; and finally, in 1763 in the reign of the Empress Catherine, it became the Medical *Collegium*. Under Peter the Chancellery, which was removed to the new capital on the Neva in 1712, had as its head an official known as the *Archiater*, reviving an old Roman title.[16] The first *Archiater* was a Scotchman, Dr. Robert Erskine; he lived in St. Petersburg, and apparently scarcely knew of the existence of the new medical school and hospital in Moscow. Neither he nor his successors ever visited it, although some of them seem to have watched its work, for they sometimes blamed Bidloo for the slowness with which his students passed through their curriculum. They also to some slight extent controlled the school and its diplomates, whom they drafted off to the army and navy as fast as they could qualify.

The Medico-Chirurgical School, as it was called, was in the meantime slowly getting under way. There were many difficulties to overcome, and the full complement of fifty students was not reached until 1712, five years after the school was opened. The Russians hesitated to send their sons to what they naturally regarded, with many other of Peter's introductions, as at best an outlandish institution, entirely out of keeping with their customs and ideas. But, as has already been seen, a medical career at that time was very lucrative and honourable, and if the Russians themselves at first held back, the foreigners settled in Moscow and St. Petersburg were by no means unwilling to send their sons to Bidloo for a medical education. Ignorance of the Dutch language was no obstacle, for Latin seems to have been the language employed in the hospital and school, and Latin was freely taught in the boys' schools in Peter's time.[17]

Of the internal economy of the medical school and the life of its students some details remain which are not without interest. The students lived in the hospital buildings, occupying thirty-two small rooms on an upper storey, technically called *bourses*. They were divided into three groups according to seniority. They were provided not only with board and lodging, but also with stuff for their clothes. Each boy received seven *arshines* (about five yards) of cloth every two years to make his *caftan*, or long outer coat, his *camisole*, and trousers. Students of the first class received a better sort of cloth than those of the second, and these than those of the third. No mention is made of linen or underclothing, but each student received a rouble a month in coin, and this sum, small though it may seem, probably had to cover the purchase of linen as well as all other small household or private expenses. The students attended the hospital early each morning, and later in the day came the lectures, or "*collegia*" as they were called. The lectures appear to have been mere dictations which were learned by heart, word for word. The dearness, and sometimes the entire absence, of

[16] The title *Archiater* was first given by Nero to his Imperial body physicians. Later to the *Archiatri Palatini* were added the *Archiatri Populares*. See Haeser's History of Medicine.

[17] Even Peter's father, the Czar Alexis, is said to have known Latin and to have read without translation the memoranda of his body physician, Dr. Blumentrost, which were written in that tongue.

paper on which to take down the lectures are worthy of mention as an index of the innumerable difficulties which must have blocked the way for the introductions and development of the sciences in those days. The curriculum included quite a wide range of subjects. There was clinical instruction, including the principles of bandaging and surgery. Anatomy was taught; Bidloo wrote a book on the subject and published a splendid anatomical atlas, with illustrations engraved on copper.[18] Peter, as is well known, purchased the famous anatomical museum of the Dutchman Ruysch for 30,000 gulden.[19] Post-mortem examinations were practised, sometimes with a medico-legal object. *Aptekarskaia Nauka*, or the Apothecaries' Science, included botany, pharmacognoscy, pharmacy, and pharmacology. The London Pharmacopœia seems to have been used. Operations were performed on the living and dead. Trephining must have been frequently performed, to judge by its constant appearance as the subject of examination questions at that time. Bidloo was an autocrat like his employer Peter. He had absolute power over everything and everybody in the hospital and school, and very severe punishments were sometimes meted out to the erring student. The severest were imprisonment on bread and water, fettering, beating with the knout, and finally—only for the worst offences—expulsion from the school to serve in the ranks of the army. Drunkenness and brawling seem to have been not infrequent, but they were most strictly punished. The course of instruction varied in length from five to seven, or even to ten, years. The comparative length of the curriculum was due to the conscientiousness of Bidloo, who would not grant to any student a diploma until he was thoroughly qualified, notwithstanding that Peter offered a high premium upon every student who passed. The first issue of diplomas was in 1713, and others followed in 1718, 1723, and 1727. The examinations for the degrees, of which there were two, those of *lékar* and *pod-lékar* (or *sub-lékar*),[20] took place in the presence of all the teachers in the school and of medical men from the outside as well.

Such, in brief, is the picture of Russia's first medical school. Not, some will say, a very attractive or striking picture when contrasted with that of a modern medical school; but when the circumstances of the time are taken into consideration, and more especially the material difficulties to be overcome, the prejudices to be soothed away, and the ingrained habits and views of a whole people to be entirely transformed and turned into totally new channels, it becomes a matter for wonder that so much was accomplished in so short a time. An equally detailed picture might be given, did space permit, of the hospital as of the school—not perhaps of its very earliest days, but as it was in 1735. That year was an epoch in its history. Bidloo, its founder and organiser, died. The Empress Anna was on the throne, and on the petition of the then *Archiater* of the Medical Chancellery the hospital came under the supervision of that body. In the same year was published the "General Reg'ament concerning Hospitals," an Imperial law which was binding, not only on the Moscow Hospital, but on the other institutions of the kind which had already been built in different parts of the country. From this remarkable historical document it is possible to see the entire organisation of those early, but by no means primitive, institutions. From it may be learned the numbers and duties of the doctors and *lékars* of various grades, of the clerical staff, the dispensers, male attendants, laundresses, cooks, gardeners, brewers, and others attached to the hospital staff; the diet of the patients (by no means an ungenerous one) may be studied in detail, as well as the modes of ventilation and lighting, the nature of the beds and bedding, and many another point of interest, while incidentally something may be gathered as to the commonest modes of treatment then in vogue. On paper the picture is that of a well-ordered, well-organised, and liberally supplied hospital. In practice—at least, in the case of the Moscow Hospital—it is to be feared it was not quite so perfect, and it will be convenient here to follow very briefly the fortunes of that institution until it lighted on better days at the very close of the last century.

The hospital under the Medical Chancellery was in no way better off, perhaps was not so well off as under the immediate direction of Bidloo, while as regards the sinews of war the military authorities proved to be far less liberal than the Holy Synod had been. For a time, with an able administrator like Baron Tcherkasof at the head of the Chancellery, it prospered; but after his day the whole establishment slowly went to ruin. And this was equally the case with the hospitals which had been built in other Russian towns—in St. Petersburg, Riga, Elizavetgrad, Kherson, and Kief. When the Emperor Paul came to the throne in 1796 it is said that there was not a hospital in the country in which 200 patients could be safely placed; there was not a ward which did not let in freely both the wind and the rain; and the hospitals were terribly overcrowded, two patients being constantly placed in one bed. Paul visited the Moscow Hospital soon after his accession and was horrified at its condition—so horrified that he at once ordered its re-construction. This was commenced in 1797, and the new building, with room for 1280 patients, was completed in 1802. A sum of half a million roubles had been assigned for its cost, but the amount expended was something over 650 000 roubles. When the present Army Medical Academy was founded in St. Petersburg in 1799 the Moscow Hospital ceased to be used for clinical instruction. It became a purely military hospital, and as such it exists at the present day. The existence of other Russian hospitals in the last century has just been referred to. It is unnecessary here to mention more than one or two of these institutions. The most important were naturally those in the new capital of St. Petersburg and the adjoining fortress-island of Cronstadt. The St. Petersburg Admiralty or Naval Hospital was solemnly opened by Peter the Great in 1716. Its position was close to that of the present large clinique of the Army Medical Academy. The Dry-land Hospital, *Sukhoputnui*, so called in contra-distinction to the *Morskoi*, or Naval Hospital, was founded in 1717. It was rebuilt after being burnt down in 1733, and in that year three new medico-chirurgical schools were instituted, one at each of the St. Petersburg hospitals and one in Cronstadt. From that date all hospitals devoted to clinical instruction were termed *generalnui*, or general hospitals.

In Catherine II.'s memorable reign quite a number of new hospitals were built. In Moscow she founded the still existing Catherine Hospital, at first intended only for the purposes of small-pox inoculation, but later turned to more general uses; the Pavlovski Hospital, named after her son, who succeeded her as the Emperor Paul; the Golitzin Hospital, and a lunatic asylum. In St. Petersburg the Obukhovski Hospital—which still exists and is one of the largest of the municipal hospitals in the city—was founded in 1784. A lunatic asylum was founded in the same year. Nor must omission be made of the hospitals or asylums characteristic of the period which the Empress opened for the treatment of secret contagious diseases. At first these seem to have been merely private houses in which patients of the upper classes were received, the utmost secrecy being observed and no questions asked as to the name or rank of the individual. It is worth noting that almost at the same time as the ukase was issued instituting these homes another ukase was signed in which strict orders were given, in the case of soldiers affected with these diseases, to make close inquiry as to the source whence they had acquired it. In 1763 was opened a hospital called the "Secret Hospital," with beds for thirty men and thirty women, and in this, as in the home just mentioned, absolute secrecy prevailed, the very linen being marked with the single word "Discretion."

Another group of institutions no less characteristic dates from the great Empress's reign. Few of those who attend the approaching International Congress in Moscow will fail to visit the famous Foundling Hospital on the banks of the River Moskva. It has long been regarded as one of the "sights" of the city, and is certainly well worth a visit. It is both the largest and the oldest hospital of its kind in Russia, dating from the year 1764. The Foundling Hospital in St. Petersburg scarcely yields to it in size, and is only six years its junior, as it was opened in 1770. These institutions were founded by Catherine with the laudable object of providing a refuge for unfortunate women in child-birth and of saving the lives of the no less unfortunate children they brought into the world.

[18] Positionum Anatomo-physiologicarum. Parts I. and II., Ludg. Batav.

[19] Ruysch wanted 50,000 gulden for the secret of his mode of preparing anatomical specimens, and refused to tell it to Erskine for less. He seems, however, to have divulged it to Peter, who told it to Blumentrost, and after passing through one or two more hands it was published by Rieger, another foreign *leib-medik* at the Russian Court.

[20] The title of *lékar* still remains. All persons qualified to practise must have the diploma of *lékar*; the higher degree of Doctor of Medicine is optional. The degree of *sub-lékar* was done away with in 1799.

VI.

The Leading Russian Practitioners of the Eighteenth Century.

IT will be noticed that the history of medicine in Russia has already become more a history of institutions than of individuals, such as it had for the most part been before Peter the Great's time. The names of certain individuals, however, still stand out with sufficient prominence to demand brief special notice. But it will be convenient first to note shortly what can be gathered as to the conditions of medical practice in Russia in the last century. So far as the bulk of the people was concerned, it would seem that for the greater part of the century they were little better off for medical aid than in the earlier periods. The hospitals already described were almost entirely filled with soldiers and sailors. The large majority of medical diplomates from the newly founded schools were drafted off to the ever-growing army and navy. Most of them, too, it must be remembered, were still foreigners, and were mistrusted by the peasantry, who preferred their *znakhars* and *znakharkas*—the "wise men" and "wise women" of the village. Travelling charlatans, popularly known as *Vengertzui*, went about the country and did a thriving trade in pills and potions. They became so numerous that Dr. Blumentrost in 1721 applied to the Senate for a special law against them. It was in that year that he drew up a scheme for the institution of a Medical *Collegium* on the lines of the other *Collegia*, as the Ministries had then come to be called, which should have the entire control of all medical affairs in the empire. Only two of the numerous points in the scheme became law. One of these was to the effect that qualification should be necessary for practice, but though it became law it seems to have remained to a great extent a dead letter.

Of the leading medical practitioners in Russia in the last century the oft-quoted name of Dr. Bidloo must unquestionably occupy the first place. He was the real founder of modern medicine in Russia, for before his time all medical practice was in the hands of foreigners, and it was he who led the way in training the Russians themselves to the medical profession. The second place should probably be assigned to Lawrence Blumentrost the younger. There were three Blumentrosts in Moscow in Peter's time—a father and two sons. The elder Lawrence, a Dutchman, died in Moscow in 1705, before the opening of the medical school. Both he and his eldest son John left less mark upon their time than the younger son Lawrence, who was born in Moscow, and sent by the Russian Government to Germany and Holland for his medical education. Having graduated at Leyden he returned to Moscow and became *leib-medik* to Peter. Many years later he was appointed to the full charge of the hospital. Of the many successive holders of the position of head of the Moscow Hospital, only one other must be mentioned here. Dr. Athanasius Shafonski, a Russian, was appointed in 1769, and in the following year the famous plague of Moscow broke out—one of the worst pestilences perhaps ever known in any city. Shafonski, in his position as head of the hospital, had ample opportunities of studying the disease and he has left an admirable description of it, both from the medical and historical point of view, in a book, now rare even in Russia, which was published by Imperial command in 1775.[21]

Other Russian names which have survived are those of Poletika, a native of Kief, who ultimately became professor in the University of Kiel—the first Russian who obtained a foreign medical chair; Ambodic,[22] a famous accoucheur, head of the Obstetrical Institute, who first introduced the use of the forceps into Russia, and who published the first Russian work on obstetrics; and Shchepin, who taught anatomy and surgery first in Moscow and then in St Petersburg. Baron Tcherkasof, though not a qualified medical man, had attended medical lectures when in England, and ultimately became president of the Medical *Collegium* in Moscow. It was owing to his exertions that in 1764 a medical faculty was added to the University of Moscow, which had been founded ten years previously. The new faculty, however, did not for many years grant degrees. The Medical Chancellery or *Collegium* was still the sole source of licences to practise, and it was not until 1794 that the first medical degree was conferred by a Russian university.[23] Tcherkasof was distinguished for his patriotism, amounting sometimes almost to Chauvinism. This was shown particularly in his relations to the foreigners, who still predominated in the Russian medical hierarchy. His endeavours were constantly directed to the replacing of them by his own countrymen; and on one occasion he went so far as to induce the Medical *Collegium* to issue a ukase, declaring that foreign doctors were no longer needed now that Moscow had a degree-granting University of her own. The ukase, however, met with a very cold reception and was never acted upon. Tcherkasof's patriotism did not prevent him from loyally coöperating with the famous Dr. Dimsdale, whom, at Catherine's command, he invited from England. Dimsdale was then the greatest authority living on the subject of small-pox inoculation. The story of his inoculation of the Empress herself and the Czesarévitch has been so frequently told that it may be very briefly recapitulated here. It was in 1768 that Catherine sent for Dimsdale, whose writings had already made his name famous. He went to St. Petersburg, and is said to have passed two months in making preliminary experiments before inoculating his Imperial patient herself. When the time came the greatest secrecy was observed. At 10 o'clock one autumn night a carriage drove up to a side door of the Winter Palace, and from it descended Dr. Dimsdale and the Czesarévitch (afterwards Emperor) Paul Petrovitch, the latter carrying under his furs an infant who was to furnish the material for inoculation. On the following day the Empress retired to Tsarskoé Selo, where she passed through the subsequent malady "with great firmness of mind." A little later Paul was himself inoculated, and when these facts were made public it soon became the fashion in St. Petersburg to be inoculated. The infant from whom Catherine had been inoculated was christened Ospennui, from *ospa*, small-pox. He was made a Court page and granted a patent of nobility, the crest on his coat of arms being a child's arm bearing a large pock-mark, which was perhaps more appropriate than beautiful. He died young, however, and the coat of arms was never borne by anyone but himself. Dimsdale received high honours from the grateful Empress. He was created a Baron, received a large sum of money and

FIG. 6.

Thomas, first Baron Dimsdale, M.D., who inoculated the Empress Catherine II. for the small-pox.

[21] A full account of this work and its author appeared in the Practitioner for November, 1894.

[22] His real name was Nestor Maxímovitch (i.e., son of Maxim) Maximóvitch, and as his surname and patronymic were identical in spelling (though not in accentuation) he took the name of Ambodic by Imperial consent.

[23] The Empress conferred the right to grant the degree of Doctor of Medicine on the University of Moscow in 1792. The first to obtain the degree, two years later, was Dr. Barsouk-Moiseef.

handsome presents, and was further rewarded by a pension of £500 per annum for life.

To return for a moment to the reign of Peter the Great, the name of Robert Erskine, already mentioned, deserves some further notice. A graduate of Oxford and a Fellow of the Royal Society, Erskine, or, as the Russians re-christened him, Areskin, went to Moscow in 1706 as physician to Prince Menshikof, and it was he who recommended him to Peter. Peter appointed him his *leib medik* in 1713, and three years later he became, as was stated earlier, the first *Archiater* of the Medical Chancellery. He travelled with the Czar through Germany, Holland, and France, and it fell to his lot to formally propose Peter for the Membership of the Paris Academy of Sciences. In the famous anecdote which relates how Peter was present at, and took great interest in, an operation for cataract performed in one of the Paris hospitals, it was Erskine who was the operator. He was a relation of the Earl of Mar, and—with how much truth need not be discussed here—was charged by his enemies in England with holding treasonous correspondence with the exiled Stuarts. He was able, however, to refute these charges to the Czar's complete satisfaction, and he remained in Russia till his death in 1718. He died at Olonetz, where he had gone to take the baths, and his remains were honoured by a magnificent funeral in the Alexander Nevski Monastery in St. Petersburg, the Emperor himself following in the funeral procession. Throughout the century the names of many other English medical practitioners in the Russian service may be met with. Lewis Calderwood went to Russia in 1728 as surgeon to the famous Preobrajenski Guards; he later held appointments in the Moscow and St. Petersburg Hospitals, and died in 1755 Matthew Guthrie obtained the right to practise in Russia in 1769 Robert Simpson joined the great Admiral Greig's fleet in 1774 and in 1792 became chief surgeon to the large Naval Hospital in Cronstadt. Charles Brown, an Aberdeen graduate, obtained the Russian diploma in 1784, and Samuel Hurst, a Cambridge graduate, obtained it two years later. Henry Holloway was surgeon to the Finnish Army in 1788; Charles Stewart was attached to the troops in Poland a little later. Jonathan Rogers was surgeon to the fleet in 1771; he also accompanied a Russian Embassy to Constantinople, and was later surgeon to the Izmailovski Regiment. He returned to England in 1799, but was again in Russia in 1803, and from that date to 1811 was general staff-surgeon to the fleet. In 1806 he published his Russian Naval Pharmacopœia.[24]

A more diligent inquiry into the records of the time would doubtless bring to light many another name which might well be added to the list. But those here given will suffice for the present purpose, with the addition of but one more, that of Dr. John Rogerson. A native of Dumfries-shire and a graduate of Edinburgh, he went to Russia in 1766 and remained in that country for just fifty years. For most of that time he was *leib-medik* to the Empress Catherine and her successors. He was with the Empress in her memorable progress throughout her realm in the year 1787. The famous De Ségur, the French ambassador, who also shared in the progress, has left a lively description of this journey in his "Souvenirs et Anecdotes." The Scotch doctor was apparently somewhat deficient in a sense of humour, for, according to De Ségur, he was on one occasion seriously offended by a very harmless and ancient jest on the part of the Frenchman. Catherine had at one part of the progress presented Dr. Rogerson with a magnificent sword in recognition of his services. The opportunity for an obvious sally was too good to be missed by the volatile ambassador. "Docteur," he said, "je vous en félicite; vous avez là une nouvelle récette, sûre et expéditive." Dr. Rogerson's name is also enshrined in a couplet written by the Empress on the death of a favourite dog:—

"Ci gît la 'Duchesse Anderson'
Qui mordit Monsieur Rogerson."

Catherine was assuredly no postess. A brief account of the French Lestocq, whose wonderful career, however, belongs rather to political than to medical history, closes these notes on the medical celebrities in Russia in the last century. The son of a member of the French Reformed Church who had settled in Hanover, he is described as "a man wholly destitute of political qualities, without discretion, and without connexions." But notwithstanding these deficiencies it was he who guided the revolution which in 1741 placed the Empress Elizabeth (the daughter of Peter the Great) on the throne of Russia. The Empress in return made him her *leib-medik*, and granted him estates and orders and other honours so long as he remained in favour. But those were the days of rampant favouritism, when nothing was certain but the uncertainty of Imperial sunshine, and when nothing was more common for those who had basked in it for a time than to fall in a day—just as many of them had risen the reverse way in a day—from the top to the bottom of the ladder of fortune—to pass from the luxuries of a palace in St. Petersburg to the prospective horrors of an *ostrog* at the mouths of the Obi. Such was Lestocq's fate. He kept the Empress's favour for some seven years, but in 1748 the almost inevitable downfall came. He was exiled to Siberia and never returned.

[24] Pharmacopœia Navalis Rossica, Petropolis, 1806.

FIG. 7.

Dr John Rogerson, Physician to the Empress Catherine II. From a photograph by Messrs. Wayland of Blackheath. The original picture is in the possession of Mr. James Wilson of Blackheath, by whose kind permission this reproduction appears in THE LANCET.

VII.

The Opening of the Present Century; the System of Tchins or "Ranks."

WITH the close of last century and the opening of the present a new era began in medicine, as in most other things in Russia. The Empress Catherine had died in 1796 after a reign of thirty-three years. The erratic Paul, who succeeded her, came to an untimely end in the gloomy palace in St. Petersburg, which still bears his name, in 1801. His reign is noteworthy if only for the re-building of Peter's famous hospital in Moscow and for the founding in St. Petersburg of the great Academy of Military Medicine, which will next year celebrate the centenary of its existence. But the accession of Alexander I, the son of Paul, was a real epoch, from which the Russia of to-day may in some sense be said to date. The new Emperor had not been many months on the throne before a vast series of reforms was instituted, affecting almost every individual and every interest in the empire. With these it is not proposed to deal here, except in so far as they touch upon matters relating to medicine. And, first, it is of interest to note the recognition given to such matters under the new *régime*. The *Aptekarski Prikaz*, the first medical department of the Government, has already been traced through its various changes of title until it became the Medical College in 1763. As such it remained for the rest of the century, though, so far as may be gathered from the records of the time, its influence during the latter half of the century was but small. But the already existing organisation of this body, such as it was, was taken advantage of by the framers of the new Ministry or Ministries which were instituted by the famous manifesto of Alexander I., issued in September, 1802. The Ministry, as the new machinery of government was collectively called,

FIG. 8.

The Moscow Clinique: The Gynæcological and Obstetric Cliniques.

FIG. 9.

The University of Moscow: The Anatomy Institute.

consisted of eight divisions, or what would now be called in Russia, and were even then spoken of as, separate Ministries. Of these, not the least important was the Ministry of Internal Affairs, and it was into a sub-division of this that the old Medical College was incorporated, together with another body which need not be further noticed here.[23] After one or two slight changes this sub-division was re-named the *Expédition* of State Medicine, a title which it retained until, in 1811, it received the title it now bears, that of the Medical Department of the Ministry of Internal Affairs.

Prince Kotchubei was the first head of this Ministry, and it was under his direction that a scheme was framed for the institution of another very important body, which, as the Medical Council, has since become the highest medical authority in the land. In its original conception the Council was framed on the lines of an ordinary learned society, but was to be regarded as a sort of consultative body, in which all the best medical learning of the time should be concentrated, and to which the Government could at any time appeal for advice or decisions on questions relating to medicine and those who practised it. It consisted of an indefinite number of members appointed by the Ministry, and these might be foreigners as well as Russians; but all were men distinguished by their medical knowledge and of high general reputation. The dean, or president, was elected by the members for three years, and there were corresponding members, a scientific secretary, and two interpreters attached to the Council.

It will be seen that as early as the beginning of the present century there were in Russia two governmental medical bodies—the *Expédition* of State Medicine and the Medical Council, both attached to the Ministry of Internal Affairs. These two authorities still exist in scarcely altered guises—the first as the Medical Department, the second still as the Medical Council. It would serve no useful purpose here to enter in detail into their functions or the relation they bear to each other. Suffice it to say that that relation was clearly defined. Briefly and in very general terms the functions of the Council were those of a legislative and the functions of the *Expédition* those of an executive body, the division of responsibilities between them being much the same as it is between the corresponding authorities at the present day. The further history of the two central medical authorities until they assumed the form they now have is soon told. In 1810 a considerable number of matters of medical interest came under the Ministry of Education, but only for a time. In 1811 another great change was made in the organisation of the Government, as the result of which a classification of Ministers was introduced, which, with some slight alterations, has remained down to the present day. Though not perhaps bearing directly on the present subject-matter it may be of interest to some readers to state briefly what that classification was and is.

In 1811 the governing authorities were grouped into five divisions, each of which contained one or more Ministries as follows:—1. *External Affairs:* Ministry of Foreign Affairs. 2. *External Safety:* Ministries of War and Marine. 3 *State Economy:* Ministries of Finance, Internal Affairs, Education, and Ways and Communications. 4. *Justice:* Ministry of Justice. 5. *Internal Safety*, Ministry of Police. In addition there was, and still is, an *Upravlénié* (Board of Direction) of foreign religious creeds. Since that date these nine Ministries have become ten, two new ones having been added and one having disappeared. The Ministry of Police was, after a few months' separate existence, absorbed into that of Internal Affairs. The two new Ministries which exist now and did not then are those of the Imperial Court and of Agriculture and Imperial Domains. It was under the new classification of 1811 that the Medical *Expédition* became, what it has ever since been called, the Medical Department, then, and for a few months after, of the Ministry of Police, now of the Ministry of Internal Affairs.

A word may be said here about another department and its curious growth from small beginnings to a useful and important part of the same Ministry. As early as 1804 Prince Kotchubei had felt the want of properly recorded statistical facts and conclusions based thereon, and at his suggestion a small *Obshtchestvo Drorian* or Literary Society of Nobles, as it was then called, was formed. This consisted of ten members, all highly educated young men of good birth, who undertook, firstly, to keep a historical record of the new Ministry and all the changes it should undergo, and, secondly, to collect and work out all available statistical information about every "government" in the country. In this way it was hoped to gain more or less reliable statistics of the whole empire. The plan, however, did not work very well, for reasons which need not be entered into. But with the re-organisation of the Ministries in 1811 a fresh impetus was given to the movement. It was proposed to form a separate statistical society, but it ultimately took shape as the Statistical Department of the Ministry of Internal Affairs—a name which defines with sufficient clearness for these brief notes its objects and functions. The use of such a department as ancillary to that of State Medicine is obvious.

And now, having traced the two central medical bodies from their early beginnings to their present state, it becomes necessary to give a brief account of them as they now are, of the duties they discharge, and of their relation to each other. The Russian Medical Council is expressly defined in the Imperial Code of Laws as "the highest medico-educational, medico political, and medico-legal authority in the empire." It consists of a president and an undefined number of members. Certain highly-placed medical officials in other departments are *ex-officio* members—namely, the director of the Medical Department of the Ministry of the Interior; the heads of the Army Medical and Navy Medical Departments; the medical inspector of the important group of philanthropic institutions founded by, and bearing the name of, the Empress Marie, the beneficent consort of the Emperor Paul; one representative each of the Ministries of Education and Finance; and some others. The remaining so-called consulting members, *soviéshtchatelnuié tchlenui*, are chosen for their ability and reputation from among the higher ranks of medical *tchinovniks* or officials. The Council meets twice a week and deals with a vast number of subjects, some of which may be briefly noted, but which are too numerous to name in full. First, there is a group of subjects which would naturally be expected to come under the decision of such a body. Such are the censorship of medical publications and advertisements; the issue of orders and regulations in regard to epidemic infectious diseases; the granting to foreigners of licences to practise; the supervision of all medical reports and observations; and the payment of pensions to medical officials. A second group of subjects may be named separately, though the line dividing them from the first is but an ill-defined one. There are matters which, though dealt with by the central authority in Russia, might be, and in some other countries are, dealt with by individual persons or institutions. Of these may be mentioned the investigation of new discoveries in medical science; the analysis of Russian natural mineral waters and instructions as to their use; and the revision of evidence in inquiries into cases of sudden death. All matters are brought before the Council either by the Minister or one of the directors of departments, and a simple majority decides, the president having a casting vote. The president, who must be a medical graduate, is nominated by the Minister and confirmed by the Emperor. At present this important post is held by Professor Pashutin, who is also *natchalnik*, dean or director, of the Imperial Academy of Military Medicine. The Medical Department of the Ministry of Internal Affairs consists of a director, a vice-director, and a certain number of sections, and it deals with a great many different matters which are grouped under the heads of civil medicine in general, legal medicine, and medical police. There is a catalogue of no less than forty-seven such matters, of which obviously only a small minority can find mention here, and as a type may be named the distribution of all qualified medical men, veterinary surgeons, and pharmaceutists who leave the Universities or the Army Medical Academy (the sole licensing bodies, as will be shown presently) and enter the public service. The appointments of all medical *tchinovniks*, or officials, whether in towns or *uyezds* (districts), whether to the local governing bodies (the *zemstvos*), to mineral spas, to the police, to quarantines, factories, or any other institution which comes under the civil administration, as well as their remuneration and removal, are in the hands of the department. In addition, all civil hospitals, all druggists' shops and druggists, and all certified midwives are under its more or less direct control, as are public vaccination, the carrying out of measures to check epidemics, and the tabulation of statistics of disease and mortality throughout the empire. These are a few of the subjects with which the

[23] This was the *Prikaz* of Social (or Communal) Supervision, which was a sort of Board of Charity Commissioners, and which did, and still does most useful philanthropic and charitable work.

department has to deal. The present holder of the responsible post of director of the Medical Department is Dr. Lev Ragozin. The department publishes a monthly journal called the *Messenger of General Hygiene and Legal and Practical Medicine*, a magazine which, in addition to the official statistics and announcements of the month, contains a large number of original articles and of references to foreign current medical literature. An annual report of the department is also issued. This contains the illness and mortality statistics of the whole empire—a vast mass of figures arranged in elaborate tables—and also the returns of the vaccination stations and the other numerous institutions, some of which have already been named, under the department's jurisdiction. The report is rather larger than our own Registrar-General's annual report. In addition to the Medical Council and Medical Department, the Ministry of Internal Affairs has attached to it a Veterinary Committee, under whose control are all matters connected with disease in animals.

In the course of this chapter the Russian word *tchinovnik* has occurred more than once. It has on each occasion been translated as "official," but a few words of explanation may perhaps make the exact meaning of the term more clear. It must be premised that the whole machinery of administration, whether central or local, is in the hands of a body of officials, who form collectively, perhaps, the largest and most powerful bureaucracy in the world. The system may be roughly conceived as a triangle, with the Chancellor of the Empire, in the first class, at the apex, and each successive rank containing more and more individuals. The *tchinovniks* are divided into fourteen ranks or *tchins*, each rank, whatever the profession or calling of the individual, corresponding with some rank in the military and naval services. The whole system of *tchins* dates from the time of Peter the Great, whose object in instituting it in 1722 was a laudable one. In his day there was but one class of nobles—those whose sole claim to nobility was that of heredity, a heredity untempered by the law of primogeniture—with the result that the most remote descendant of a "noble" still claimed nobility, to whatever walk of life he had actually descended. It was Peter's object to replace this class of nobles by another whose claims should be those of real service done to the State or to the Emperor. In this he did not succeed, as the old class of nobles with the old form of heredity still remains, but he succeeded in adding to them a new class of nobles. This he did by decreeing that among civil officials, or *tchinovniks*, as they were henceforth called, the first four ranks should confer hereditary nobility, and those from the fifth to the ninth personal nobility. In the army and navy the hereditary nobility was conferred by the first six *tchins*, and personal by the last eight. The preference given to the army and navy is thus seen in the fact that in them all the fourteen ranks carried nobility with them, while this is the case with only nine out of the fourteen civil grades.

Those who are curious in such matters may be interested to know that a doctor of medicine belongs to the eighth *tchin* (that of *Assesseur de Collége*); that he ranks with a major in the army and a lieutenant-captain in the navy, and is entitled to be addressed as "*Vashé Vuisokrodié*" ("*votre haute-naissance*"). A *lékar*, on the other hand, or holder of the lower medical qualification, only ranks with a captain in the army and a lieutenant in the navy, and is addressed as "*votre haute-bonne-naissance*" only—a longer title, but one conferring less honour on its recipient. A university student, who must have passed out of one of the State *gymnasia*, has already his foot on the ladder of ranks as a member of the fourteenth class. And it is open to the medical man to rise to almost any rank. His services to the State may be rewarded by the honorary title of Privy Councillor or Actual Privy Councillor, titles which raise the bearer to the third and second ranks respectively. Or he may receive from the Emperor some decoration which will give him an almost equally high position. Mere length of service, too, entitles the Government medical official to a rise in rank; thus, after four years' honourable service he would rise one step higher than that he had previously occupied; but the highest *tchin* attainable in this mechanical way is that of Privy Councillor, which occupies the third class in the table of ranks. Service in more remote parts of the empire, such as Siberia or Central Asia, entitles to a quicker rise, two days counting as three, or three as four, as the case may be. But to enter into all the intricacies of the great system of *tchinovnism*, even only so far as they affect medical men, is an absolute impossibility. The laws and regulations relating to it fill a volume of themselves.

VIII.

The Medical Bureaucracy in Russia.

IT will be convenient here to give a brief sketch of the medical bureaucracy as it now exists in Russia. Naturally the highest places are occupied by the two central authorities just described, the Medical Council and Medical Department. Many other central institutions, such, for example, as the Medical Chancellery of the Ministry of the Court, the Medical Faculties of the Universities and the Army Medical Academy, the medical officers to the "Institutions of the Empress Marie,"[26] and the Medical Departments of the Army and Navy, fill high positions, as so also do the physicians or *leib-mediks*, surgeons or *leib-chirurgs*, and specialists appointed to the Imperial family. It is not, however, proposed to consider these here. Here we propose to give a brief outline of the public medical service—that is to say, the service which in town and country is responsible for the public health of the people and for free medical aid to the poor. In no other nation is the distinction between urban and rural communities so marked. The towns are separately considered by the law from the country; so that every town has its *golova*, or mayor; its *duma*, or town council; its *vprava*, or executive board; and to these and the police are entrusted the organisation of a sanitary service and the provision of hospitals and dispensaries for the poor. The details of the law are not the same for all parts of the country, and some large towns, more especially the capitals, have entirely distinct organisations of their own in this respect. Both Moscow and St. Petersburg may well be proud of their immense municipal hospitals and dispensaries and of their public health services, which have done so much, and are still doing so much, to provide for the sanitary needs of these rapidly growing cities. It may be asserted without hesitation that some of these hospitals[27] will prove veritable revelations to many foreign visitors to the International Medical Congress, whose knowledge of Russia and her institutions may be of that vague and inaccurate, even if not prejudiced, nature which is but too common.

With this reference to urban resources, we pass to a subject which is in some respects of greater interest, as it presents many points more characteristic of the nation—that is, the public medical service in the country districts, and more particularly among the peasants, who form so large a majority of the population. To make this quite clear a brief account of the system of local administration which prevails in Russia is absolutely essential. It shall, however, be as short and concise as possible.

The whole country of Russia (or so much of it as is not under military rule) is divided for administrative purposes into "governments" (*gubernii*) and "provinces" (*oblastui*). Each[28] of these, again, is divided into "districts" (*uyezds*), which are again sub-divided into "towns" and "rural *volosts*"—a *volost* being made up of an indefinite number of village communes or *mirs*. Now each of these divisions and

[26] These institutions have already been briefly referred to. The Russian empresses and princesses have ever been, and still are, foremost in promoting good works of all sorts, and those of two sorts they have taken under their special protection—namely, institutions devoted to charity in any form and those connected with the education and interests of women. It is just a hundred years since, in May, 1797, the Empress Marie, the wife of Paul, took, with the Emperor's consent, all such institutions under her immediate patronage, and each succeeding empress has shown the greatest interest in the welfare of the "Institutions of the Empress Marie," as they have ever since been called. Only a very few of these can be named here. Among those devoted to charity may be mentioned the immense Foundling Hospitals in St. Petersburg and Moscow, hospitals, orphanages, and refuges for the poor of all kinds and descriptions; and among those devoted to the interests of women, the Xénia Institute in St. Petersburg and a vast number of schools and *gymnasia* for girls in all parts of the country. There are in all 539 charitable and educational institutions under the board of management (which is practically a Government department in itself). The voluntary subscriptions received during the past fifteen years have amounted to over 12,000,000 roubles, equivalent to an annual sum of 800,000 roubles, or over £80,000.

[27] And not only the hospitals, but the many other medical institutions, some of which will be described in detail, but many of which must escape mention from want of space. Such, for example, is the Imperial (Oldenburg) Institute of Experimental Medicine in St. Petersburg.

[28] This description applies only to those parts of the country in which the system of *zemstvos* has been introduced. This has now been done in a majority of the "governments" of European Russia.

sub-divisions has its governing body. The "government," as the largest division, may be taken first. Each government is administered by a council, or *gubernskoé zemstvo*, an executive board, or *gubernskaia uprava*, and a "committee for peasant affairs." The functions of these bodies need not be considered except in so far as they deal with medical matters. To each government *uprava* is attached a medical board (*vratchebnoé upravlénié*), consisting of a medical inspector and his assistant, a pharmaceutist, a secretary, and a consultative board, to which any number of medical men, even unofficial practitioners, may be added. These medical boards have very considerable powers, and can decide many important medical and sanitary matters without reference to the Central Medical Department, to which, however, they are ultimately responsible. Here are some of their duties and responsibilities. All medical men, whether officials or private practitioners, all *feldschers*, all midwives, all druggists and their shops, and all civil hospitals are under their more or less direct control. In their care is always a sufficient store of surgical instruments which the central authorities provide free of cost, and which the boards are allowed to lend whenever required to any medical man, whether official or in private practice, under, of course, proper guarantee for their return. All medical practitioners in the "government" are by law enjoined to make monthly returns to the board of all cases of illness and death which have been under their care, whether in or out of hospital. As a matter of fact, this injunction is to a large extent not carried out, and in the majority of instances yearly instead of monthly reports are returned, while in many instances, especially in the case of private practitioners, the instruction to return cases of illness as well as of death is not complied with. It might, indeed, be seriously questioned whether such monthly returns of illness would serve any useful purpose, particularly as the returns of acute infectious cases are separately provided for. The Medical Department publishes annually the figures of some 26,000,000 cases of illness which have been registered, but in a population of nearly 130,000,000[29] this obviously does not represent the true totality of sickness. All public health measures, the medical topography of the government, the control of lunatics, in a word, all medical and sanitary matters come under the jurisdiction of the board. The mode of procedure is defined with very great exactitude in the Medical Code of Laws,[30] or by different regulations which have been issued from time to time to cover particular cases. It may be added in passing that the whole medical law of Russia, with these various regulations now collected for the first time and inserted under the paragraph of the law to which they bear reference, is in course of publication. The first of the three volumes to which this great work will ultimately extend has recently been issued and is a model of careful editing. It is unnecessary to enter here into the methods by which the multifarious duties of the government medical board are carried out. It is sufficient to say that the activity of the board is to a great extent concentrated in the person of the inspector, who is directly in touch with, and responsible for, the institutions and individuals under the board's control. As in the case of the board, so in that of the inspector, the law is so worded that the widest interpretations may be put upon the duties of both.

Such, in brief, is the provision made for dealing with medical matters by the "government," or largest division of the land. The next smaller division is the *uyezd*, or district. This is administered by a council or *zemstvo*, an *uprava* or board, and a committee for peasant affairs, just as a "government" is. But the district has no medical board. It has, however, at least one official, *uyezdnui vratch*, or district medical officer, and a certain number of veterinary surgeons and *feldschers*, or trained medical assistants. There are also a committee of public health and a vaccination committee (*komitet obshtchestvennago zdravia* and *ospennui komitet*). The constitution of these two committees is very similar; that of the first may be taken as a type. It consists of the "leader of the nobility" of the district, the *ispravnik* or police commissary, the police master, the district medical officer, the mayor of the town (the capital town of the district), and the senior priest of the district, thus representing a considerable number of different interests and classes of society; other members may be added, such as local estate-owners, doctors, priests of different religious creeds, and so forth. Both the committees work in conjunction with the government medical board, and have immediate control of the sanitary and medical interests of the district.

As already stated, the *uyezd* is made up of a number of *volosts*, these again consisting of a collection of village communes. But lower than the *uyezd* the law does not provide for any medical appointments. The district medical officer is, so to speak, the ultimate unit in the medical bureaucracy, and in view of his responsibilities and of his isolated position in the country the Ministry of the Interior has made provision for a more prolonged course of medical instruction in his case than in that of the ordinary medical graduate. For this purpose a certain sum of money is set aside annually which enables the Ministry to send a selected number of these officials to St. Petersburg or other university towns for further post-graduate study. This is also done in the case of the government medical inspector, who of course occupies a much higher position and one of much greater administrative responsibility than that of the district medical officer. Both these titles are only gained after severe examination in the universities, and both appear in the list of medical degrees attainable at a university, as will be explained hereafter. Few questions have been the subject of more controversy than those connected with this appointment of district medical officer or *uyezdnui vratch* and the duties he has to fulfil. Touching as it does upon economic questions of the highest interest, the subject is one that might well claim more detailed treatment than can, from exigencies of space, be given to it in these notes. Here it must suffice to state the problem in its simplest terms, without any attempt at determining the solution of it.

Ignoring for the moment the towns, and also certain special parts of the country, such as the Caucasus, the Cossack Territory, and Central Asia, Russia may be said to be inhabited by a peasantry—a peasantry which six-and-thirty years ago was in a state of absolute serfdom. The law of Feb. 19th, 1861, emancipated them from this condition, and subsequent laws[31] have provided a system which has given them large powers of local self-government combined with ultimate responsibility to the central authorities on the Neva. With the newly acquired freedom came newly acquired responsibilities and a corresponding need of increased education to meet those responsibilities. It would be idle to assert that education has advanced with the need of it, and few will be found to deny that the Russian peasantry is practically an uneducated peasantry. With absence of education are inevitably joined a degree of superstition and a ready credulity on all matters outside the individual's narrow circle of knowledge. In bare terms it would be harsh and unfair to describe the Russian peasantry as uneducated, superstitious, and credulous without mentioning their many good qualities. A deep religious faith, no lack of practical intelligence, and plenty of common sense in questions within his own immediate ken, added to a simple kindliness—an inexhaustible fund, indeed, of what may be comprehensively termed "human nature,"—these are some of the qualities which make the Russian peasant quite one of the most attractive and sympathetic of all peasants. It is the provision of this peasantry—who, be it remembered, are for the most part scattered over wide areas of country—with a system of medical aid which shall be at once effective, prompt, free of cost to the peasants, and not too ruinously expensive to the local authorities, which constitutes the problem these authorities are called upon to solve, for it is largely on the local governing bodies that this duty falls. The law only provides that every *uyezd* shall have at least one medical officer, but it is clear that in the great majority of instances this number would be totally, even absurdly, inadequate, and it is left to the *zemstvos* to make up the deficiency according to local needs. The greatest practical difficulty with which they are met is the scattered nature of the population with which they have to deal. There are, roughly, two main systems of providing medical aid, each of which has its advocates and its opponents. In one, the so-called "stationary"

[29] The preliminary report of the census carried out in January last has just been issued and states that the total population of the Russian empire was then 129,211,000.

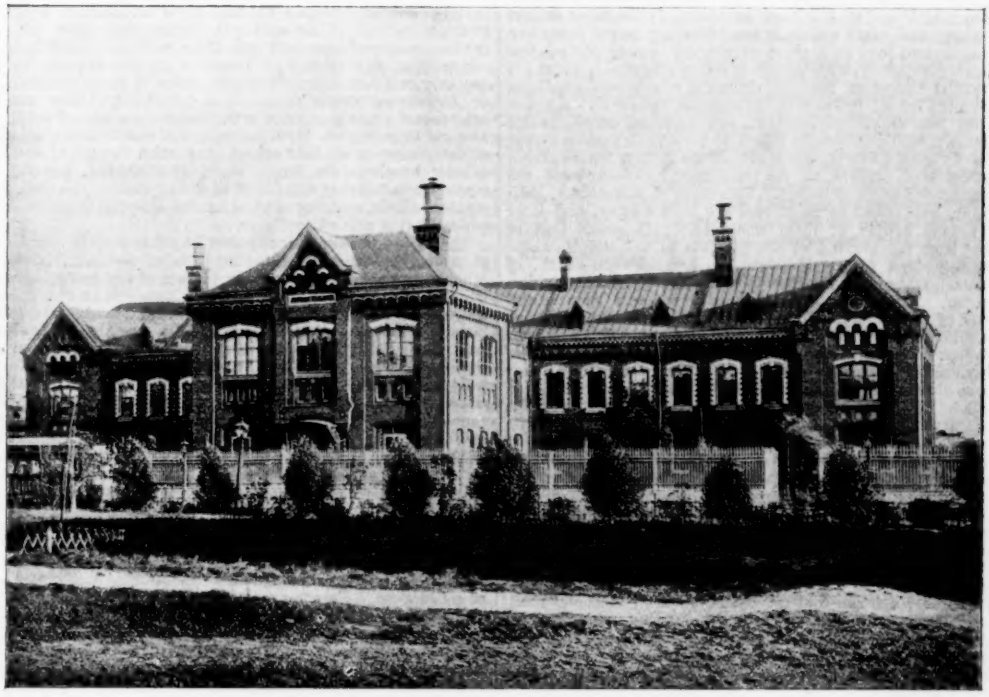
[30] Ustav Vratchebmie, or Medical Statute; being the twelfth volume of the Svod Zakonov or Collection of Laws. The last edition was that of 1892.

[31] Notably those of Jan. 13th, 1864, which instituted the system of *Zemstvos*, and of July 12th, 1889, which introduced the local committees for peasant affairs.

(*statzionarnui*) system, the medical man lives either in the "district town" or in some village in his own division of the district; he there receives all patients who have need of him at certain fixed hours of the day, and only pays visits in case of necessity. In the other, the so-called *raziézdnui*[32] system, the medical men live in the central or "district" town, and, the district being parcelled out into divisions, they visit in turn every part of it on given days of the week or month. Under this system each village has its fixed day, perhaps twice in a month or oftener, when "the doctor" will be there to receive patients at a room in one of the cottages fitted for the purpose, or, if necessary, to visit them at their own homes. During the interval his patients are in the hands of a *feldscher*, whose functions will be defined later.

And now it will be asked, How do these systems succeed in practical working, and do they provide the peasantry with an adequate medical service? The answer must be "yes" and "no"—qualitatively, "yes"; quantitatively, "no." As far as quality is concerned the *uyezd* medical officer receives the highest university education; he is doubly a university graduate, for after obtaining the ordinary medical degree he proceeds to the further examination for the "Service" degree of *uyezdnui vratch*. Nor would it be possible to find a more conscientious, more devoted class of official. But so far as quantity is concerned it must be at once admitted that the supply of fully qualified medical aid to the Russian peasantry is inadequate. A few figures showing the number of medical men in the empire and their proportion to the population will suffice to prove this. According to an indisputable authority[33] on such matters the figures for 1890 were as follows. In a total population then reckoned at 110,000,000 (and the results of the recent census show that the total was considerably larger) there were 18,334 medical practitioners of all kinds, including those in the army and navy. There was, therefore, one doctor to every 6000 inhabitants. Further, when the towns were excluded and the rural population alone considered, it was found that the proportion of medical men was reduced to 1 in 9000; that in some districts it sank to 1 in 12,000; while in the whole government of Archangel there were but 14 doctors to 373,000 inhabitants. Slightly more recent figures which have since become available show practically no increase. From these figures, then, it is clear that at least in many parts of the country there is an insufficient supply of medical men. It will naturally be asked whether, in those parts of the country where there are no medical men or only an inadequate number, the peasants, all or some, are left without medical aid of any sort whatever. This, however, is not altogether the case, for there is in Russia, in addition to the class of fully qualified medical men, a second class of practitioners drawn from a lower social stratum and passing through a more restricted curriculum. As a matter of fact, *feldschers*, as these secondary practitioners are called, are more numerous than regular practitioners in Russia. So important, indeed, is the part they play and so thoroughly national is the whole system of *feldscherism* that they deserve a brief chapter to themselves.

FIG. 10.



The Moscow Clinique: The Clinique for Diseases of Children.

[32] From "raziézjat," to drive round.

[33] M. Anitchkof, a State Secretary (literally Companion of the Minister) for Education, adduced these figures in his address at the opening of the new Medical Faculty in the New-Russia University in Odessa in September last

IX.

The Feldscher.—Feldscherism Described and Discussed.

IT would appear to be a fact that Russia is the only country in Europe in which the principle of a secondary or subordinate class of medical practitioner is admitted. Some other countries may still in practice countenance the

existence of licence-granting bodies whose examinations require a minimum of medical knowledge to pass; but their diplomates belong practically to the same great social group as graduates with the highest university degree—the group of qualified medical practitioners. There is no secondary class bearing a different title, with a less thorough training and with inferior rights of practice. But in Russia there is such a class, and as the resulting system has been severely condemned by some critics and no less warmly defended by others, it has become a subject of frequently recurring controversy, and therefore merits some consideration here. There are two types of *feldscher*, the military and the civil. The latter will be chiefly considered here, but it is practically almost impossible to separate the two groups from each other, for a large number, even a majority, of civilian *feldschers* are, as a matter of fact, men who have once served in the same capacity in the army. Their very name, *feldscher* (which is, of course, the German word for army surgeon incorporated bodily into the Russian language), as well as their history, indicate clearly that the system was originally a military one, and their employment in civil life only a later development.

The origin of the system in the army is rather a curious one. It dates as far back as the early decades of last century and came about in the following way. It may be remembered that in a previous chapter, among the punishments mentioned as meted out to erring students in Peter I.'s Medical School in Moscow, the most severe was expulsion from the school to serve in the ranks of the army. A somewhat less drastic punishment, one reserved especially for students who persistently failed to pass their examinations, was to send them to serve, not in the ranks, but as bloodletters and barbers to the regiments. These were the earliest *feldschers* in Russia. This class of half-doctor, half-nurse, was found to be of real use in the army, and later a second supply of them was found. It seems that at that time the nursing of the patients in the hospitals was entirely done by the students—an arrangement which, of course, materially interfered with their medical studies proper. To obviate this the experiment was successfully tried of sending annually a certain number of boys, the sons of soldiers, to the hospitals to be trained in the arts of bloodletting, dressing of wounds, and nursing generally. In this way the students were set free from nursing duties, and a new class of army *feldschers* was formed. But these were still, it will be noted, entirely a military class, either nursing in the military hospitals or attached to regiments in the field. The civil *feldscher* is, in fact, only a recent growth of the present century, and dates from that great period of reform which followed the emancipation of the serfs in 1861, and the institution of the system of *zemstvos* a few years later. Even now the majority of *feldschers* in civil employ are drawn from the so-called "regimental (*rotnwié*) *feldschers*"—that is to say, men trained in the military hospitals or lazarets, as distinguished from the "school (*shkolnuie*) *feldschers*," or men trained in the army schools. These schools, of which there are four (in St. Petersburg, Moscow, Kief, and Tiflis), turn out a more thoroughly trained class of men than the so-called regimental *feldschers*, but the latter are far the more numerous. Of schools for educating civilian *feldschers* there are altogether twenty-one in Russia.

It will be interesting and essential to the right understanding of the *feldscher's* position to note briefly what is the course of training in these schools. To begin with, then, the school will generally be found attached to some large hospital in one of the central towns of a "government." The education begins early, pupils being taken generally at the age of thirteen years. As the boys are mostly drawn from the less educated classes of the population the first subjects they are taught are those of ordinary school education—scripture, history, arithmetic, Russian, Latin, writing, geometry, and geography. Later come the more advanced and the professional subjects proper. Of these an immense list is mentioned as included in the curriculum—botany, zoology, physics, anatomy, physiology, chemistry, pharmacology, pharmacy and pharmacognosy, pathology and therapeutics, surgery, diseases of children, eye diseases, ear and throat diseases, hygiene, epidemiology, venereal diseases, skin diseases—in a word, all the subjects required for a full medical degree. While the programme of a *feldscher* school includes all these subjects in full detail it is obvious that in the four years available only the elements of these sciences can be taught, or, at least, retained by the pupils. The last two years are spent in practical work in the wards. Here the work is mainly confined to the duties of nursing and of dressing the surgical patients; the physical examination of medical cases is also taught, and, it may be added, post-mortem examinations are attended and taken part in by the student. At the end of the four years the qualified *feldscher* leaves his school with a certain amount of medical knowledge and with certain more or less defined rights and privileges. These vary slightly with different schools, the diploma of each school bearing with it certain privileges which are stated in the *ustav*, or statute, of the particular school. Here, for instance, are the privileges—which are equally duties—of *feldschers* with the certificate of one of the central schools, that at Mogilef:—

"*Feldschers* of this school have the right to act independently in the following circumstances: (*a*) they may give the necessary aid in acute and dangerous cases in places where there are no medical men, but on the first opportunity it is their duty to inform the district medical officer (*uyezdnui vratch*) of the case; (*b*) they may act independently on the appearance of epidemic infectious diseases, such as cholera, scarlet fever, small-pox, measles, or typhus, but they should at once give information to the district medical officer and get instructions from him; (*c*) they may perform small operations, such as blood-letting, vaccination, the setting of fractures or dislocations, &c.; (*d*) they may act independently in cases of acute poisoning or threatened death from other causes; (*e*) they must act generally in accordance with instructions issued by the Medical Department. With permission of the district medical officer *feldschers* of this school may take charge of small *volost*[34] hospitals (in large, scattered districts), but they must present weekly returns of such hospitals to the district medical officer, and the control of the hospital is under the supervision of this officer."

The rights here mentioned may be taken as fairly typical of those conferred by all the Russian civilian *feldscher* schools, and they give a very fair picture of the sort of duties which a *feldscher* is expected to fulfil. As will be seen from the second paragraph, he may be in sole charge of small hospitals, and not only is this often the case, but he is also not infrequently in almost sole medical charge of the population of a large district. Not, of course, immediately after leaving his school, for it is clear that a youth leaving the *feldscher* school at the age of seventeen years, after a four years' course, part of which was devoted to ordinary school subjects and only two years to practical work in the wards, could not be regarded as qualified to take the sole charge of patients. Possessed of that little knowledge which in medicine, more perhaps than in anything else in life, is a dangerous thing, some further training is essential if the *feldscher* is not to be more active for harm than for good. The next step in his career, therefore, as a rule, is for him to become attached to some hospital, when he occupies a really useful position, somewhere between the positions of a male nurse and a house surgeon. Here the *feldscher* may spend the rest of his life, or he may in time become appointed by a district *zemstvo* as the sole permanent medical adviser to the peasant population in some country district. In most parts of European Russia he will have the advantage of the advice and control of the district medical officer. Nominally, indeed, the health of the whole population of the district is in the hands of the medical officer, whose orders the *feldscher* carries out during the intervals of his superior's fortnightly visits. But practically in a large number of instances the terms above used are nearer the truth, the *feldscher*, living on the spot, being the real permanent medical adviser, the district medical officer, who visits the village at stated intervals, having only a consultatory and controlling influence.

The whole question of the system of *feldscherism* has been, and still is, hotly discussed in Russia. There are those who affirm that the system is the very foundation-stone of the whole structure of *Zemskaia Meditzina* (or medical aid to the peasants at the cost of the *zemstvos*), and that were it done away with the peasants who have a voice in the *zemstvo* would not vote another *kopeck* towards maintaining the structure. According to those who hold this view, the peasants regard the *feldscher* as an institution peculiar to

[34] A "volost," as has been explained, is a collection of village communes for administrative purposes.

themselves and one not lightly to be done away with. "The doctor," they will say, "oh! he is the gentleman's doctor, but the *feldscher* is the *moujik's* doctor." On the other hand, there are equally acute observers who hold quite a contrary opinion. The peasants, according to this school of observers, are only content with a *feldscher* when they have never had the opportunity of being treated by a doctor. Provide them, they say, with properly qualified medical aid and they will at once take the fullest advantage of it; they even now mistrust the *feldscher*, and much more willingly submit to the advice of the medical officer. *Feldscherism*, according to this view, far from being the keystone of a successful system of medical aid, is the greatest stumbling block to its development in the right direction.

It is, perhaps, rash for a foreigner to attempt to decide on the value of any national institution or custom, and the one under consideration is a thoroughly national institution—a system found in no country outside the frontiers of Russia. This is, indeed, in the eyes of those who uphold the system, one of the strongest arguments in its favour. They are proud of the fact and assert that in this way Russia has solved a problem with which all nations are faced, but of which no other nation has found a satisfactory solution. They declare that even in those countries, such as England, with the largest number of medical men in proportion to the population, there will still not be enough, and many of the people will remain without medical aid or seek that of druggists and unqualified practitioners. In Russia druggists are strictly forbidden to give medical advice; unqualified practice and charlatanry are common enough, "wise men" and "wise women" existing in every village; but it is as a counterbalance to these, it is as a means of preventing the peasant falling into such hands, that the system of *feldscherism* is so highly lauded by those who approve of it. The argument is ingenious and may be readily accepted as far as it goes; but it is not the whole truth. The fact would appear to be that *feldscherism* is at best a compromise—an attempt to solve a difficult problem by half-measures. As a satisfactory permanent solution of the problem it can scarcely be accepted. Medical aid to a population, whether of peasants or any other class of people, if it is to be supplied at all, should surely be of the highest quality possible. In dealing with health and disease, life and death, half-measures have a way of being either useless or worse than useless. What, however, can be truly said in defence of *feldscherism* is that even half-trained medical aid is better than none at all; that as there is an insufficient supply of qualified medical men the peasants would, in the absence of *feldschers*, be entirely at the mercy of the "wise men" or "wise women" of the villages. It may be freely admitted that such a lot would be infinitely, incomparably, the worse of the two. The *feldscher*, if he be an intelligent man—and they are, as a rule, a most intelligent, kindly, willing race of men—gains a great deal of practical knowledge in his hospital and other experience, and this in a large number of simple cases will prove of real value; while the "wise" man or woman (some apology is due to the *feldschers* for mentioning them in the same sentence, and thus even appearing to compare them) is for the most part guided by traditions and superstitions which often lead to the most disastrous and hideous results in practice.[35] As an important and earnest effort on the part of the authorities to provide the peasantry for the time being with properly trained medical assistance and as an alternative to the mischievous help of "irregular practitioners" the present system may be honestly commended. The *feldscher* is, of course, much cheaper than the doctor, even if there were sufficient doctors available, and this has been shown not to be the case. And regarded as a highly trained male nurse, always working under a medical man, the *feldscher* is beyond question an admirable institution of the greatest use in hospitals and even in villages. But where the present system seems to be less commendable, at least in the eyes of a foreigner, is in the development it has taken in the country districts, where the peasants are often left for long intervals in the *feldscher's* sole medical charge. This, if it is to be commended, can only be regarded as a temporary measure, corresponding to the transitional economical and intellectual state of the peasantry at the present time. The principle of a secondary class of medical practitioner, with inferior education, training, and rights of practice, appears wrong. It seems probable that its existence is only a question of time, though it must of course be a very long time, for the number of qualified medical practitioners in Russia to reach a point when they shall be accessible to all. There will then be no need of a secondary class of practitioner; the *feldscher*, as such, will disappear, or will remain as an exceptionally well-trained male nurse.

Feldscherism is not likely soon to be done away with; indeed, it is obvious from what has already been said that until the number of medical men can be proportionally increased, to do away with it would be an unmixed misfortune for the peasants. There are at present more *feldschers* than medical men in Russia. The numbers in 1892 (the latest available) were 12,174 (civil) medical men and 16,568 (civil) *feldschers*. In the same year, in the twenty-one civil schools 204 *feldschers* finished their course; but, as already stated, the majority of *feldschers* in the country are trained either in the military hospitals or in the army *feldscher* schools.

A very intelligent man, a Russian army *feldscher*, put into black and white his views on the whole subject of *feldscherism*. His little essay contained much really useful information, some of which has been made use of above, and it ended thus: "Russian doctors not only do not approve of *feldschers*, but they contend with *feldscherism* as with the phylloxera or any other destructive insect. But they cannot possibly do without *feldschers*. There are comparatively few doctors in Russia (say 15,000), and if they were to work unassisted for twenty-four hours in the day, still two-thirds of the population would be left without medical aid."

X.

Russian Universities and Medical Education in Russia.—The Ten Universities.—The Ministry of Education.—The University Authorities.—The Faculties.—The Medical Chairs and Professors.—The Curriculum.—The Degrees, and Mode of Obtaining Them.—State Examinations.—Statistics of the Universities.—The Army Medical Academy in St. Petersburg and Sir James Wylie.

IN Russia a medical practitioner must not only possess a diploma, but he must have obtained his medical education and his diploma from a university; in other words, all Russian medical practitioners are university graduates. Licence-granting colleges or schools of medicine or surgery are institutions unknown in Russia; and so also, *à fortiori*, are schools or colleges affording facilities for medical training, though not themselves granting diplomas to practise. It is at the universities alone that students can obtain both training and diploma. There is one apparent exception to this rule, and that is the Imperial Academy of Military Medicine in St. Petersburg, or, as it is more generally called, the Army Medical Academy. Its exceptional nature is, however, more apparent than real, for the Academy may be regarded for all practical purposes as a substitute for the absent faculty of medicine in the University of St. Petersburg, which (since the very recent addition of a medical faculty to that of Odessa) is now the only Russian university without such a faculty. There are, in all, ten Russian universities, including those of Helsingfors and Dorpat (now Yurief), which have only become Russian since their foundation. They may be briefly enumerated, together with their dates of institution and mode of origin. The University of St. Petersburg was opened in 1819 in the reign of Alexander I. It was practically a development, with new organisation and powers, of the former so-called "Principal Pedagogic Institute." The University of Moscow was instituted by the Empress Elizabeth in the year 1755. It is consequently the oldest purely Russian university. The first medical degree granted in Russia was conferred by this

[35] Quite recently a "wise woman" (*znakharka*) advised a mother to put gunpowder into her baby's eyes and apply a match as a cure for ophthalmia. The mother did it; the ophthalmia was destroyed, but so were both eyes, and the baby died in agony. Another woman roasted her baby in the stove under similar advice. But the horrors of this sort of "practice" are too great to dwell upon. Nor must it be supposed that they are confined to Russia; they would appear to occasionally occur in all countries.

University in 1794. The University of Kazan was founded by Alexander I. in 1804. The University of Kharkof was opened a year later by the same Emperor. The University of Novo-Rossiisk (i.e., New Russia), in Odessa, was instituted by the late Emperor Alexander III. in the year 1865 by the conversion into a university of the pre-existing Richelieu Lyceum. This was an important institution which had been founded by the Duc de Richelieu, a French *émigré*, who in 1830 became the first Governor of Odessa. The University of St. Vladimir, in Kief, was instituted in 1833 and opened in the following year by the Emperor Nicholas I. It took the place of the former Polish University of Vilna, which was suppressed after the Polish rising of 1833. The University of Warsaw dates from 1869, when the so-called *Glavnaia Szkola*, or Head School, was converted into a university. It has a statute of its own dating from the year of its foundation, and differing from the statute common to most of the other Russian universities. The University of Yurief was known as the University of Dorpat prior to the year 1892. It has been under a Russian statute since the year 1802. The older university was founded by the great Swedish ruler, Gustavus Adolphus, in 1632. The University of Tomsk, the sole one in Siberia, was brought into existence in 1887. It has at present only a medical faculty, but it is expected that very shortly a juridical faculty will be added. The Alexander University of Helsingfors is the successor of the old Finnish University of Abo. This was removed to Helsingfors after the destruction of Abo by fire in 1827. The older university was founded in 1640.

With the exception of the last four in the above list all Russian universities are under one common code of laws or statute, the so-called University Statute (*Universitetski Ustav*). There have been four such statutes in successive operation during the present century, those of 1804, 1835, 1863, and 1884. It is the last, that of 1884, which is now in force. Under the older statute of 1863 the universities enjoyed wider rights of self-government, and were in general more independent of the State authorities, than is the case under the present law. The relation which the universities now bear to the Government authorities may be very briefly stated before passing on to consider the medical faculties and the course of education provided by them. The universities, as educational institutions, are administratively under the Minister of State for Public Instruction (*Ministr Narodnago Prosviéshtchénia*). For the purposes of this Ministry the country is divided into fifteen districts[36] or circuits (*okruga*), each of which is administered by a curator (*popetchitel*) or representative of the Government. This official is in direct touch with the university as well as with all other educational institutions of any kind whatever that may exist in his district. He has considerable powers, among which may be mentioned the appointment of the deans of faculties and of some other university officials; and he is, moreover, the direct and only link between the Government and the universities, all communications between the two having to pass through his hands. The internal affairs of the university are managed by the following authorities: (*a*) the rector, the practical working head of the institution; (*b*) the university council—i.e., all the professors, under the presidency of the rector; (*c*) the university board—i.e., all the deans of faculties and the inspector of students, under the presidency of the rector; and (*d*) the inspector of students, whose functions are generally those of a proctor.

A complete Russian university should contain four faculties—namely, a Historico-Philological, a Physico-Mathematical, a Juridical and a Medical Faculty. It will be observed that there is no mention of a Theological Faculty, and, as a matter of fact, the University of Yurief (Dorpat) is unique among Russian universities in possessing such a faculty. A fully equipped medical faculty contains the following twenty-three chairs:—(1) Anatomy; (2) Physiology; (3) Histology and Embryology; (4) Medical Chemistry; (5) Pharmacognosy and Pharmacy; (6) Pharmacology, with prescription-writing, toxicology, and instruction in the use of mineral waters; (7) General Pathology; (8) Pathological Anatomy; (9) Medical Diagnosis; (10) Special Pathology and Therapeutics; (11) Nervous and Mental Diseases; (12) Dermatology and Syphilology; (13) Therapeutic Faculty Clinique; (14) Therapeutic Hospital Clinique[37]; (15) Operative Surgery with Topographical Anatomy; (16) Surgical Pathology with Desmurgy[38] and instruction upon Dislocations and Fractures; (17) Surgical Faculty Clinique; (18) Surgical Hospital Clinique; (19) Ophthalmology, with Clinique; (20) Midwifery, Gynæcology, and Diseases of Children, with Cliniques; (21) Medical Jurisprudence; (22) Hygiene, with Epidemiology, Medical Police, Medical Statistics, Epizoology, and Veterinary Police; and (23) History and Encyclopædia of Medicine.

There are two kinds of professors in a Russian university, the ordinary and the extraordinary (*ordinarnui* and *extra-ordinarnui*). The distinction between them may be made clear by stating that the ordinary professor takes a higher rank than the extraordinary, being entitled to a position in the fifth class, or *tchin*, in the system of ranks already briefly explained in Section VII.; while the extraordinary only ranks in the sixth class. The former also receives a higher stipend than the latter, the sums being respectively 3000 roubles and 2000 roubles[39] per annum. In the University of Tomsk, in Siberia, these stipends are increased by one-half in consequence of the isolation and other disadvantages of an appointment in that distant city. There is another class of professors to who allusion must be made; these are the so-called supernumerary (*sverkhshtatnui*) professors—i.e., those who are not on the *shtat* or list of professors proper. They may be either ordinary or extraordinary, and are either teachers raised to the rank of professor before a vacant chair offers itself for occupation, or professors who, having served for thirty years, are placed on the retired list, although they continue to deliver lectures. In addition to the professors there are an indefinite number of *privat docents* in a Russian university. The system, as well as the name, has been borrowed from Germany.

The number of students is not limited. Moreover, it is worth noticing that the number of medical students never has been limited. Even in the stormy period of 1848, when the revolutionary wave which swept over Europe was repeated in the serious student disorders in some of the Russian universities, and when the Emperor Nicholas I. limited the number of students to be admitted to each university to the comparatively low figure of 300, the medical faculties were expressly exempted from any such limitation. For admission to the universities now a student has to present a certificate of proficiency from one of the Government *gymnasia*, or high schools, or from some other school recognised as equivalent by the Minister of Education. Students are allowed to enter only at one period of the year, on or before Aug. 20th (old style), that being the day on which the autumn session or half-year begins. There are two sessions in the year, from Aug. 20th to Dec. 20th, and from Jan. 15th to May 30th. The vacations are consequently of rather less than a month's duration at Christmas, and of nearly three months' duration in the summer. The entering student or freshman must be at once inscribed in one or other of the four faculties. The fees are not large; each student pays a sum of 5 roubles (about half a guinea) each half-year, and an additional sum of 1 rouble for each weekly lecture he arranges to attend—that is to say, that if, for example, he arranges to attend eighteen, twenty-four, or thirty lectures in the week, he will pay 18, 24, or 30 roubles for that half-year.

The full list of medical degrees obtainable at a Russian university is a long one, including, as it does, not only the two ordinary medical degrees, a lower and a higher, found in almost all universities in other countries, but certain other degrees in addition connected with the public services, and

[36] The fifteen districts are those of St. Petersburg, Moscow, Kazan, Orenburg, Kharkof, Odessa, Kief, Vilna, Warsaw, Riga, the Caucasus, Turkestan, Eastern Siberia, Western Siberia, and the Amur.

[37] The distinction between a "Faculty Clinique" and a "Hospital Clinique," whether Therapeutic (i.e., Medical) or Surgical, is briefly as follows. The first is endowed and supported by the university, and the second usually belongs to the town or city authorities and is only subsidised by the university. The Faculty Clinique is attended by students in their fourth year; in it everything is carried out, as far as possible, in an ideally scientific manner—there is no haste, and students can study selected cases at their leisure. The Hospital Clinique, on the other hand, is attended by fifth-year students, and it is conducted on the lines of an ordinary hospital; the cases are not selected, and men are enabled to learn here the practical working of a large hospital, and to get accustomed to the rapidity of diagnosis and judgment necessary in a large general practice.

[38] The word "Desmurgia" includes what may be summed up as practical minor surgery and bandaging.

[39] A rouble is a little over two shillings. These stipends are equivalent, therefore, to rather more than £300 and rather more than £200 respectively.

qualifying those who obtain them to hold some of the appointments described in an earlier chapter. The degrees are consequently divided into three groups, called respectively the learned-practical (*utcheno-praktitcheski*), learned-official (*utcheno-sluzhebnui*), and special-practical (*spetzialno-praktitcheski*) groups of degrees. In the first group, the learned-practical, there are three degrees—namely, in ascending order of value, those of (*a*) *lékar*, or practitioner; (*b*) doctor of medicine; and (*c*) doctor of medicine and surgery. In the second group, the learned-official, there are also three degrees, those of (*a*) district medical officer (*uyezdnui vratch*, whose functions were defined in an earlier chapter); (*b*) medical member (accoucheur or operator) of a *zemstvo* medical board; and (*c*) medical inspector to a *zemstvo* medical board (*inspektor vratchebnoi upravui*). In the third group, the special-practical, are the degrees of (*a*) dental surgeon (*zubnoi vratch*); (*b*) dentist (*dantist*); and (*c*) midwife (*povíralnaia babka*). It may here be added that all chemists and druggists, and all veterinary surgeons, are compelled to obtain a diploma by examination conducted in a university before being allowed to practise their calling. Of these many degrees much might be written, but it will suffice here to summarise the requirements of the universities for the two most important degrees, those of *lékar* and Doctor of Medicine, only adding a few condensed notes on the method of conferring the other degrees.

The degree or title of *lékar* is the lowest degree entitling the holder to practise. The curriculum required for it extends over five years, or ten sessions, during which the student must attend lectures in all the subjects in which he is going to be examined at the end of that period. There are class-examinations each session, and, in addition, at the end of his fifth session the student has to pass the so-called "half-course" (*polu-kursovui*) examination before he can continue his curriculum. At the end of the five years the student presents himself for examination for the degree of *lékar*. He must hand in the following certificates:—(*a*) of attendance at the university for ten sessions; (*b*) of good behaviour from the university inspector of students; (*c*) of having passed his half-course examination, with any remarks of the examiners; and (*d*) detailed certificates from each professor as to the work done by the candidate since the "half-course" examination, countersigned by the dean or secretary of the medical faculty. In addition, the candidate must send in his photograph and the sum of twenty roubles (about two guineas), the examination fee. It will be noticed that in this way the examiners are enabled to gain a very good idea of what sort of work the candidate has done as a student, and this may have some influence on the result of the examination.

The examination is conducted by a Government examining committee or board (*ispvitatelnaia commissia*) annually appointed by the Minister of Education. The board consists of five members and a president. The subjects of examination are divided into five groups, corresponding to the five members of the board, each of whom appoints the examiners in his particular group. The examiners so appointed may be selected from the professors and *privat-docents* of the same university in which the examination is to take place, or from eminent men, specialists in the particular subject, from elsewhere. In the latter case the choice must be confirmed by the Minister of Education. The following are the five groups and the division of subjects between them:—

First Group: (*a*) Descriptive Anatomy; (*b*) Histology; (*c*) Pathological Anatomy and Pathological Histology; and (*d*) Operative Surgery and Topographical Anatomy.

Second Group: (*a*) Physiology; (*b*) General Pathology; (*c*) Medical Chemistry; (*d*) Pharmacology, Prescription Writing, and Mineral Waters; and (*e*) Pharmacy and Pharmacognoscy.

Third Group: (*a*) Special Pathology and Therapeutics; (*b*) Nervous and Mental Diseases; (*c*) Diseases of the Skin and Syphilis; (*d*) Diseases of Children; (*e*) Clinical Examination in the Medical Wards; and (*f*) Clinical Examination in the Skin and Syphilitic or in the Children's Wards.

Fourth Group: (*a*) Surgical Pathology, with Desmurgy and Treatment of Dislocations and Fractures; (*b*) Ophthalmology; (*c*) Midwifery and Gynæcology; (*d*) Clinical Surgery; and (*e*) Clinical Ophthalmology and Midwifery.

Fifth Group: (*a*) Hygiene and Medical Police; (*b*) Legal Medicine and Toxicology; and (*c*) Epizoology and Veterinary Police.

The examination in all these subjects is entirely of a *viráva voce* or practical character. There are no written examinations in any subject as with us in England. The principal question asked the candidate is drawn by the candidate himself from a ballotting-urn, in which are placed a number of slips of paper with questions written on them. The first question drawn may be refused, but there is only a second chance, and the second question drawn must be answered by a candidate who has declined the first. In addition to the principal question the examiners have the right to ask any other reasonable question within the limits of the particular subject. The examiners classify the result in each case as either "unsatisfactory," "satisfactory," or "very satisfactory." Two "unsatisfactories" are sufficient to stop any further examination and "plough" the candidate. For honours, or, as it is called, *lékar s' otlitchiem* (or *cum eximiâ laude*), it is necessary to obtain at least eleven "very satisfactories" out of the twenty-three subjects, and not one "unsatisfactory." Should the candidate fail he may come up again after two sessions, and should he fail a second time he may try a third time; but this is his last chance, as under no circumstances may he be examined a fourth time. There is no minimum age-limit mentioned in connexion with the degree of *lékar*. Practically, however, as most boys leave the *gymnasia* about the age of eighteen, and as the curriculum extends over five years, this degree is usually taken at the age of twenty-three.

Having obtained the degree of *lekar* the graduate may at once proceed, if he wishes, to obtain the higher degree of Doctor of Medicine. This degree is still one of the "learned-practical" degrees; but should the new regulations, which have for some time been under the consideration of the authorities, come into force, it will be raised a step higher and become a purely "learned" (*utchenui*) degree. To obtain it under the present regulations it is necessary to have the lower qualification of *lékar*, to pass a written examination, and to present and defend a dissertation. The written examination consists of a paper containing two questions only. When this is satisfactorily passed the candidate may submit his dissertation to the approval of the faculty, and when that is gained he must print not less than 500 copies and lodge them with the university authorities. This is done at the candidate's own expense, and should the dissertation be of any length the expense is sometimes considerable. There is even some talk of increasing the number of copies required, at least in the Army Medical Academy in St. Petersburg (where 500 complete copies and 300 abstracts of the dissertation are now demanded), as the list of foreign and Russian universities and medical institutions to which copies of each dissertation are sent is an ever-increasing one. Appended to the dissertation must be a certain number of definite propositions or conclusions (*theses*), of which six at least must be purely medical in character. The public defence of the theses takes place at a meeting which is duly advertised, and which is freely open to the general public. Not only members of the university, but anyone present, may rise and controvert the statements or views of the candidate. As a rule, however, the three official "objectors" (*vozrazhatelui*) appointed by the faculty are the sole speakers on these occasions. The result is announced immediately, and if the verdict is satisfactory the "faculty oath" is read and signed, and the candidate, now a candidate no longer, is an accepted Doctor of Medicine. In the rare case of rejection of a dissertation the candidate may come up again after an interval of not less than three or more than six months to defend either the same dissertation a second time or a newly written one.

Should the proposed new regulations for obtaining the doctorate become law considerable changes will be introduced into the method just described. Three years will have to elapse from the time the candidate has obtained the degree of *lékar* before he will be permitted to present himself for the higher one. He will then have to pass a fresh searching examination in all the subjects required for the lower degree, and this examination will be specially directed towards some one special branch of medical science chosen by the candidate. There are seventeen such branches of specialism named, but it is scarcely necessary to repeat them here.[40] The most important point is that practically under

[40] Vide THE LANCET, Oct. 26th, 1895.

these regulations the M.D. degree would in future be obtainable by specialists only. The dissertation would be required as now, but it would have to be presented within five years of passing the examination; failing this the examination would have to be repeated. It is still uncertain whether the new regulations as thus drafted will be ratified by the Medical Council.

The degree of Doctor of Medicine and Surgery is, as a matter of fact, very rarely taken. It is obtained in the same way as that of Doctor of Medicine, but the examination in surgery, theoretical and practical, is especially searching.

The conditions for obtaining the "learned-official" (*uchcheno-sluzhebnui*) degrees are adapted in each case to the special kind of knowledge which the holder of the degree will be likely to require in the particular office which the degree will entitle him to fill. Thus, for example, a candidate for the title of "district medical officer" (*uyezdnui vratch, vide* Chapter VIII.) must have one of the ordinary medical degrees already described, and must pass a special examination in legal medicine, medical police, first aid, epizoology, and in the duties and social relations of a district medical officer. A candidate for the degree of "operator" or "accoucheur" to a *zemstvo* medical board must have the degree of *uyezdnui vratch*, and must pass an examination in surgery or midwifery, as the case may be. An inspector of a medical board (*inspektor vratchebnoi upravui*) must have the degree of M.D., and have been in the public service for at least six years, and he must pass a very wide examination, not only in the special subjects just named as needed for the title of district medical officer, but also in medical law, State medicine, and medical administration, veterinary police, and pharmacognoscy.

Of the "special-practical" (*spetzialno-praktitcheski*) degrees little need be said here. A "dentist" (*dantist*) and a "dental surgeon" (*zubnoi vratch*) must pass a university examination before being permitted to practise. It may also interest many readers, particularly those who approve of a proposed Bill which has been the subject of much recent agitation in the medical world in England, to know that in Russia a midwife (*povivalnaia babka*) must be properly trained and pass an examination before she can follow her calling, and that this examination is conducted in the universities.

Before closing this account of the medical degrees conferred by Russian universities it is necessary to add that in Russia all druggists are by law compelled to pass an examination as to their fitness for such an occupation. There are three titles, those of "apothecary's assistant," "provisor," and "master of pharmacy" or "*aptekar*." An "apothecary's assistant" must have been a pupil for not less than three, or more than five, years in a recognised druggist's shop, not in a village, and must pass an examination. A "provisor" must have had the lower title for three years, must have attended courses of lectures on mineralogy, botany, zoology, chemistry, physics and pharmacology, &c., and must pass a written examination in these subjects. A "master of pharmacy" must first have obtained the title of provisor, and must pass a still wider examination in the subjects just named, and he must also present and defend a dissertation with at least six *theses*. The examination is largely practical, and includes chemical and medico-legal analyses. For veterinary surgeons there are also three titles of ascending value, those of "veterinary assistant," "veterinarian" (*veterinar*), and "master of veterinary science."

The following Tables contain interesting statistics of the medical faculties and degrees of the Russian universities (excluding Helsingfors). The figures are for the year 1895. They have been most kindly furnished by the Ministry of Public Instruction. The medical faculties of the universities have alone been referred to, to the almost complete exclusion of another great degree-granting body, the Army Medical Academy [41] in St. Petersburg. The Imperial Academy of Military Medicine, to give it its full title, is intended mainly for the training of surgeons for the services. It is not, however, confined to this, and many civilian practitioners have gained their diploma or degree at the Academy. The curriculum here is practically the same as at the universities, and so are the degrees and the mode of obtaining them. The large majority, however, of the students ultimately enter the army or navy medical services.

The Academy is older than any of the universities, with the exception of that of Moscow. It was founded by the Emperor Paul in the year 1798, and opened in 1800. Next year the centenary of its foundation is to be commemorated with all due solemnity in St. Petersburg, and in honour of the occasion a detailed history of the institution will be published, and is, indeed, already in course of preparation. Space will not permit here of more than a brief mention of some points in its history. The Academy has been successively under the Ministry of the Interior, under

[41] Voenno-Meditzinskaia Akademia; in rendering this "Army Medical Academy" it should be mentioned that the Russian words imply that both the military and naval services are included in the objects of the Academy.

TABLE I.—*The Numbers of Students in the Russian Universities on Jan. 1st, 1896.*

Universities.	Faculties.						Total.
	Theological.	Historico-philological.	Physico-mathematical.	Juridical.	Medical.	Eastern tongues.	
St. Petersburg	—	194	1085	1673	—	105	3057
Moscow	—	251	929	1587	1330	—	4147
Kharkof	—	39	150	376	800	—	1365
Kazan	—	37	131	185	451	—	804
St. Vladimir (Kief) ...	—	53	329	1020	1032	—	2434
Novo-Rossiisk (Odessa)	—	41	253	281	—	—	575
Tomsk	—	—	—	—	413	—	413
Yurief (Dorpat)	225	40	95	95	716	—	1171
Warsaw	—	29	137	347	453	—	966
Totals	225	684	3109	5564	5245	105	14,932

TABLE II.*—*Medical Degrees and Titles conferred by the Russian Medical Faculties† in the year 1895.*

University.	Medical degrees.				Other titles conferred after examination.					
	Doctor of Medicine.	*Lékar* (with honours).	*Lékar* (without honours).	District Medical Officer.	Master of Pharmacy.	Provisor.	Apothecary's Assistant.	Dental Surgeon.	Dentist.	Midwife.
Moscow ...	23	28	189	146	1	81	114	23	3	156
Kharkof ...	6	23	81	95	—	14	114	16	25	93
Kazan ...	3	44	26	16	—	12	52	—	4	157
Kief	2	21	147	5	—	22	47	30	20	20
Tomsk ...	—	17	43	—	—	—	—	—	—	—
Yurief ...	47	140		11	1	117	82	—	22	18
Warsaw ...	2	97		14	—	17	54	27	5	38
Totals ...	83	864		237	2	263	463	96	79	482

* It is necessary to note in connexion with this table that under the system of examination for degrees by Government commissions it is scarcely correct to say that such and such a university conferred so many degrees in any given year. Students may pass their examination in any university they choose, no matter where they have completed their curriculum. The above figures refer to students who obtained their degrees in the examinations conducted at the universities named. That they were not all students of the university where they passed their examination is shown by the following example: In Moscow (*vide* the report of the University for 1895) 174 Moscow students obtained the title of *lékar* in the year 1895; but the total number of students who obtained the title in that year by examination in the Moscow University was 217. Confusion may easily arise between the two sets of figures.

† Only seven universities appear in this table, as there is no medical faculty in the University of St. Petersburg, nor was there one in that of Novo-Rossiisk, in Odessa, until last autumn. In 1896 the Army Medical Academy in St. Petersburg granted the title of *lékar* to 136 successful candidates.

that of Public Instruction, and finally, since 1839, under the Ministry of War. For many years, early in the century, its fortunes were closely linked with those of a distinguished Scotchman, Sir James Wylie, who for a quarter of a century occupied the honourable position of head of the Army Medical Department in Russia, and was practically the head of the whole profession in the country for that period. Wylie first went to Russia in the year 1790, when, after an examination, he was appointed surgeon to the Eletzk Regiment. In 1798 he was appointed body surgeon to the Emperor Paul. The story of his having attracted the attention of the Czar by his successful treatment of a certain Count Kutaisof by lancing a large abscess in the neck after other surgeons had despaired of success—a story which gave rise to the saying that "Wylie had made his fortune by cutting a count's throat"—may be taken for what it is worth. It is certain that he gained the confidence of both Paul and his successor, Alexander I., who promoted him to the highest honours in his power to give. In brief, Wylie in his time was the most prominent figure in the medical world in Russia. It was more particularly in the direction of improving the medical services of the army and navy that his professional activity found scope. The Napoleonic wars had given a stimulus to all departments of the army, and in 1811 the first Medical Department of the War Ministry came into existence. Wylie was its first director, and this post he retained until the year 1836. He took a prominent part in the campaigns of 1812 and 1813, and it was in recognition of this that, at the personal request of the Emperor Alexander, he obtained his knighthood, and later his baronetcy. He was knighted by the Prince Regent, who used the famous Cossack Platof's sword for the occasion, on board one of the Russian ships then lying off Portsmouth. In Russia his memory is perpetuated by the fact that attached to the Army Medical Academy, of which he was for many years the president, is a clinical hospital built from funds which he left for that purpose, and named after him. Its full name is the Michael Clinical Hospital of Baronet Wylie (pronounced in Russian *Vilié*), but it is more commonly known as the Wylie Clinique. It is not the principal clinical hospital of the Academy, but occupies three sides of a square, in the centre of which is a life-size statue of the founder on a high pedestal.[42] The cost of erecting the hospital was 943,000 roubles (nearly £100,000); it was opened in 1873. It contains 150 beds, made up as follows: 40 medical, 40 surgical, 20 ophthalmic, 30 obstetric and gynæcological, and 20 for children's diseases; 120 of the beds are free, the remainder are occupied by paying patients, at a charge of from 45 to 60 roubles per month. The medal, of which an illustration appears here, was struck on the occasion of Sir James Wylie completing his fiftieth year in the Russian service in the year 1840. For the loan of the medal and permission to reproduce it thanks must be given to a collateral descendant of the baronet now resident in St. Petersburg.

Since the death of Sir James Wylie the Army Medical Academy has always had for its president one of the most distinguished army surgeons of the day. The names of Pelican (1846–57) and Yenokhin (1857–62), to mention but two, are still remembered with honour. At present the Academy is under the presidency of Dr. Victor Pashutin, who is also President of the Medical Council, and as such occupies the most honourable position in the medical profession in Russia. It may be added that the present head of the Army Medical Department, which is now called the Army Medical Board (*Upravlenié*), over which Wylie presided for so long, is Dr. Alexander Remmert, the corresponding position in the navy being occupied by Dr. Vladimir Kudrin.

FIG. 11.

IMPERAT. AUGUSTISS. OMNIBUS. VIRTUTIBUS. ORNATISS. ACADEM. MED. CHIR. PETROP. ET. MOSQ. XXX. A. PRÆS. ATQ. CUR. MED. NAT. DIRECT.
JACOB. WYLIE. EQUES. BARONETTUS. MED. ET. CHIR. DR. PLURR. ORDD. EQUES
VIRO. ILLUSTRISS.
SUB. TRIUM. IMPERAT. AUSPIC.
EGREGIO. MEDICINÆ. CASTRENS.
IN. ROSSIA. MODERATORI.
ANNOS. L. ARTI. SALUTARI. CONSECRATOS.
VENERABUNDI. GRATULANTUR.
ROSSIÆ. MEDICI
PETROPOLI. D. IX. DEC. MDCCCXL.
DECORUM.
FORTITER. PRO. PATRIA. PUGNASSE.
NON. MINUS. DECORUM.
SAUCIUM. SANASSE. MILITEM.

Medal presented to Sir James Wylie, Bart., Physician to the Emperor Alexander I., first Director of the Academy of Military Medicine, and Founder of the Wylie Clinical Hospital in St. Petersburg.

XI.

The University Cliniques in Moscow.—Their Origin.—State and Private Generosity.—The Cliniques Described.—The Systems of Heating, Ventilation, Water-supply, &c.—The "Institutes."—The Operating Theatres.—The Hospital System in Russia.—Hospitals in Town and Country.—The "Hospital Statute."—The Medical Staff of Hospitals.

PRIVATE munificence and State and municipal liberality have combined to produce in Moscow one of the largest and best-equipped series of cliniques attached to a university to be found in Europe. Until some ten years ago the clinical work of the Moscow students was carried on in two large hospitals, the old and new Catherine (*Staraia-* and *Novaia-Ekaterininskaia*) Hospitals, in the centre of the town and not very far from the University buildings. But as far back as 1873 the need of wider accommodation for patients and of more modern clinical facilities for the professors and students had made itself felt, and in that year an elaborate scheme for a new clinique was proposed by one of the professors and submitted to the University authorities. It was warmly approved of by the medical faculty, but was for some reason rejected by the University Council, and consequently the scheme for a time came to nothing. But only for a time; nine years later it was revived at a more auspicious moment in consequence of the generous offers of two wealthy ladies, Mesdames Pashkalof

[42] The following is a more detailed description of the statue. The pedestal is of grey marble, the figure is seated, and holds in one hand the reformed statutes of the Academy; caryatides adorn the angles of the pedestal, and between them are bas-reliefs representing incidents in the life of Wylie. His coat of arms and that of the Academy also appear.

and Morczof, who announced their readiness to provide funds for building two special cliniques, one of forty beds for obstetric cases and one of sixty beds for the treatment of nervous diseases. This was really the first step towards the realisation of the wishes of the medical faculty for new clinical buildings. In 1883 the University obtained authority to sell the ground and buildings of the old clinique, and to employ the sum thus realised towards the erecting of a new one. A commission was formed to carry out the scheme, and this commission was presided over by Professor Sklifosovski, the president of the organising committee of the International Congress about to be held in Moscow.

In the autumn of 1884 the municipality of Moscow most generously ceded to the University a large space of vacant ground on the *Diévitché Polé* (or "Field of the Virgin") as the most suitable site for the new clinique. The ground thus ceded was very nearly forty-five acres in area, and at about the same time this was increased by another most opportune gift of adjoining land. The second gift of land was due to the generosity of Madame Morozof, one of the ladies already mentioned, who had offered to build at her own expense a hospital of sixty beds for the treatment of nervous diseases, and who now presented the University with over fourteen acres of land upon which to build it. The Commission was thus relieved of one great difficulty and expense, that of finding an appropriate site for the new buildings. Matters now moved forward rapidly. A small committee of three, consisting of M. Bikovski, the architect of the University, and Professors Sréziref and Erismann, was sent abroad to study some of the principal foreign university cliniques. They visited Munich, Zürich, Berne, Strasburg, Heidelberg, Leipzig, Halle, Berlin, and Paris, and on their return a detailed scheme of the new buildings was drawn up. It was found that to carry this out completely a further sum of two and a half million roubles—that is to say, over £250,000—would be required; while even if only the most essential parts of the scheme were executed a sum of at least 1,711,000 roubles would have to be asked for. Ultimately, in the spring of 1886 the Government gave a grant from the treasury of 2,150,000 roubles, or about £220,000, for the purpose of building the new clinique. But the generosity of the State and of private individuals was not yet exhausted. In 1887 the Government voted an annual sum of 30,000 roubles for the endowment of the Psychiatric Clinique; in 1889 it granted two annual sums of 15,750 and 16 830 roubles respectively, for the Obstetric and Gynæcological Cliniques; and finally in 1890 the Council of State consented to grant in full the demands of the University for the furnishing and equipment of all the other cliniques and laboratories, and, with very slight reductions, to endow them with the sums asked by the University authorities. The most striking examples of private munificence, in addition to those already mentioned, have been the gift from M. Solodovnikof of funds to build the Clinique of Dermatology and Syphilis, the erection by Madame Bazanof of the Clinique for Diseases of the Ear, Throat, and Nose (at a cost of 515,000 roubles), and the donation of 70,000 roubles from Madame Barbe-Alexéief for the construction of the general out-patient department. Many of the cliniques bear the names of their generous founders.

It has been necessary to enter into some detail with regard to dates and figures, at the risk of appearing tedious, in order to give the reader some idea of the scale upon which the scheme of providing the first of Russian universities with adequate clinical accommodation has been conceived and carried out. From first to last, not far short of half a million sterling must have been expended upon it, while the annual grant from the State Treasury is considerably over 415,000 roubles (about £43,000). The buildings, which were erected from the designs of M. Bikovski, the architect of the University, and MM. Goedicke and Strom, of St. Petersburg, cover a space of ground measuring 3920 feet from N.E. to S.W. and 525 feet from N.W. to S.E. The "Field of the Virgin" upon which they stand is a large irregular open space, taking its name in all probability from the New Convent of the Virgin (*Novo-Diévitchi Monastyr*) close by. This striking and picturesque mass of ecclesiastic buildings, surrounded by high walls like some mediæval fortress and surmounted by a characteristic dôme-capped tower, is one of the most interesting of the innumerable monasteries and convents in and around Moscow. It was founded in 1524 to commemorate the capture of Smolensk by the Russians from the Poles. The buildings of the clinique are about twenty minutes' drive from the Kremlin, which for practical purposes may be regarded as the centre of Moscow. The drive is a pleasant one—past the Temple of the Saviour, the immense cathedral with white walls and monster gold dome, built in memory of the famous incidents of 1812; along the *Pretchistinka* street, passing many of the small gaily-tinted churches and pleasantly gardened villas, which are as characteristic of Moscow as they are unlike the churches and houses of the more modern capital on the Neva; and finally, along one side of the "Field of the Virgin," by the Great Tsaritsyn-street (*Bolshaia Tsaritsynskaia*) until the clinique itself is reached. The convent makes an admirable landmark for the stranger uncertain of his way to aim at; and at a very short distance beyond are the famous Sparrow Hills, from which Napoleon first saw the gold roofs of Moscow, and which still afford the finest views to be had from anywhere of this wonderful city.

The clinical buildings nearest the town are those of the Psychiatric and the Ear, Throat, and Nose Departments; but as these lie off the main road to the left they will not at first be observed. The first clinical buildings which catch the eye are a series of two-storeyed, yellowish-white buildings on the right, running partly at an angle and partly parallel with the main road (see Fig. 5); and a taller, more ornate, red-brick structure on the left. The latter is the Children's Hospital, better known in Moscow as the Khludof Hospital, in honour of its founder, M. Khludof, who left a sum of half a million roubles (over £50,000) for the purposes of building such a hospital (see Fig. 10). Of the buildings on the right side of the road the first is a block containing the Obstetric and Gynæcological Cliniques, lying at an angle of 45 degrees with the main road, and quite close to the Church of St. Michael the Archangel, the church attached to the clinique (see Fig. 8). Continuing along the Great Tsaritsyn-street, and still on the right-hand side, will be found the Faculty Cliniques, medical and surgical, a two-winged building with a common entrance in the centre. It is the open space in front of this entrance which has been chosen as the most appropriate site for the statue of Pirogof, the unveiling of which is to form one feature of the congress week. Some distance further on is an almost identical building, containing the surgical and medical hospital cliniques. (The difference between a faculty clinique and a hospital clinique was explained in a previous chapter.) Still further is the Clinique for Skin Diseases and Syphilis, a handsome building of quite different architectural character from those already described. It is easily recognised by its corner-wise position and its brilliant white colour; it consists of a central block with Corinthian columns ornamenting its face, and two wings, one parallel and the other at right angles with the main road. The end of the "Clinical Townlet" (*Klinitcheski gorodok*), as this great series of hospitals is familiarly called, is now almost reached in this direction. Lying back from the main road on the right may be seen a side view of the Institute of Pathological Anatomy, which will be mentioned again later; and beyond this are the four detached "barracks" for the reception of children suffering from infectious diseases. This completes the list of buildings in the Great Tsaritsyn-street. Behind and running nearly parallel with it is a second series, divided from the first by another street, which, as it is not a public thoroughfare, but the exclusive property of the clinique, has not received any name. Following this road and taking the second series of buildings in the same order as the first, it may be said to begin with the Institutes of Hygiene, General Pathology and Pharmacology, all in one block, situated directly behind the Faculty Cliniques. Next to this are a number of important and useful, if less interesting, institutions—the kitchen, laundry, disinfection chambers, artesian wells, and water-tower. Still further along are the Propædeutic Wards (i.e., the preliminary clinical wards for the instruction of third-year students in the elements of clinical observation) and the Ophthalmic Hospital. A long stretch of garden is now reached, in which are some of the professors' residences and a block of dwellings for the servants and attendants. Directly facing the end of the road and bringing it to an abrupt termination is the façade of the Institute of Pathological Anatomy (already briefly mentioned), and in this same block of buildings are contained also the Institutes of Legal Medicine and of Operative Surgery.

The number of beds made up in the various hospitals that have been just enumerated is as follows :—

Name of Clinique.	Professor's name.	Number of beds.
Surgical Faculty Clinique... ...	Professor Bobrof	80
Medical ,, ,, ...	,, Popof	67
Surgical Hospital ,, ...	,, Sinitzin	83
Medical ,, ,, ...	,, Ostrōumof ...	82
Nervous Diseases ,, ...	,, Kojevnikof ...	44
Propædeutic ,, ...	,, Tcherinof ...	48
Ophthalmic ,, ...	,, Krukof	34
Contagious Diseases ,, ...	,, Filatof	32
Psychiatric ,, ...	,, Korsakof... ...	50
Obstetric ,, ...	,, Makéief	40
Gynæcological ,, ...	,, Snégiref	40
Dermatological ,, ...	,, Pospiélof ...	60
Throat, Ear, and Nose Clinique	—	15
	Total	675

It will be impossible, and it would, in fact, be superfluous, to describe here in detail all the wards, laboratories, lecture theatres, operating and dressing theatres, waiting-rooms, microscope rooms, Roentgen-ray rooms, bath-rooms, and offices—in a word, all the component parts of one of the completest of modern cliniques. Members of the Congress will have frequent opportunities during their stay in Moscow of seeing these for themselves, for clinical demonstrations will be held almost daily, and many of the sectional meetings of the Congress will take place in the theatres of the clinique. But some general impressions and notes gathered on the occasion of two visits to this city of the sick, and supplemented by the detailed information in the official description of the clinique published specially for the members of the Congress (for advance proofs of which thanks are due to the courtesy of Professor Klein, Dean of the Faculty of Medicine), may be of interest.

The various cliniques, general and special, differ to some extent in details, but the general principles upon which they are constructed are common to them all. They are all built on the system of separate blocks with lateral corridors. In the wards an air space has been allowed of 1489 cubic feet (45 cubic metres) per patient. The height is 14 ft. (6 *arshins*), and consequently the floor area for each bed is just over 100 square feet. In almost all the cliniques there will be found on entering a large hall or vestibule, where coats, hats, and sticks are left in charge of a *suisse*. This may seem an unnecessary statement to make, but it may not be known to some who have not visited Russia previously that on entering any building whatever, be it to make a call of only two minutes' duration, it is the unalterable custom to leave the overcoat as well as the hat and stick or umbrella in the hall. To enter a Russian dwelling-room in an overcoat is scarcely less discourteous than to enter it with one's hat on. A few steps usually lead up from the hall to the ground-floor corridor, off which lead the wards and other rooms and offices. The corridors, 12 ft. in width, are features of all the cliniques. With their colour-washed walls of cream or pale blue and dado of oil-paint, with their polished oak parquet-floors, their large double windows, their comfortably warmed and artificially moistened air, and their polished pine-wood tables and benches (for the patients take their meals here), these corridors present a distinctly attractive appearance, and serve as excellent promenades for patients who are not confined to their beds. Here, as in the wards, all angles of walls, floor, and ceiling have been well rounded off to prevent lodgment of dust. A word may also be said of the broad stone staircases leading to the upper storeys, upon which, in many instances, will be found a second large vestibule or landing hung with lavishly-framed portraits of members of the Imperial family or of the "donors" of the particular clinique. The first impression upon entering the wards is one of comfort and cheerfulness. The wards are for the most part small, rarely containing so many as a dozen patients in each. The beds stand at some distance from the walls, and, at least in some wards, each of the legs of the bed is inserted into an india-rubber cup, which materially lessens the chances of jarring and external shocks. The clean white blankets are a pleasant change from the grey blankets met with in most Russian hospitals. The walls are treated in the same way as those of the corridors, and the floors are of the same oak parquet, which is thought to be as hygienic as any other material, and is certainly the most pleasant-looking of all hitherto suggested for this purpose. In all the cliniques the professor has a most comfortable and even luxurious private cabinet. In that of Professor Pospiélof, the courteous professor of dermatology, and probably in others, are two articles of furniture deserving of mention. One is a neat disinfecting chamber in which the professor's blouse (large white blouses are worn by all the staff when at work) or coat can be disinfected by dry heat in a very short time. The other is a washing-stand of French manufacture, consisting of a light plated-steel frame on rubber-covered wheels, and supporting a plate-glass basin and reservoirs for water and disinfecting solutions. It appears to be the perfection of a hygienic washing apparatus.

The wards and all the other parts of the cliniques are artificially heated by hot-water pipes sunk in the lower part of the walls. The pipes in the wards are about two inches in diameter (some of the main pipes are as broad as eight inches), and at intervals the heating surface is increased by a number of square transverse plates or wings of metal at right angles to the pipe. The water is heated by naphtha furnaces in special out-buildings. Ventilation has been carefully provided for. The foul air is artificially extracted through openings, in all cases as near the floor as possible; fresh air, warmed and moistened by a specially designed and somewhat elaborate apparatus, is admitted through grilled openings about two-thirds of the distance up the walls. In summer the large windows (of double parallel sashes 8 in. apart, like all windows in Russian buildings) can be opened and allow of a very thorough aeration of the buildings; but in a climate like that of Moscow some carefully-planned system of artificial ventilation, such as the one here briefly described, is a necessity in the long and intensely cold winter. It is but fair to add that in a visit paid to several of the cliniques late in November there was no perceptible stuffiness or draughtiness—the Scylla and Charybdis of all artificial systems of ventilation—in any of the wards; on the contrary, the air felt pleasantly warm and at the same time fresh and sweet. It is almost superfluous to state that the electric light is laid on in all parts of the clinique. The water-supply is derived from an artesian well, and a second such well is now being bored to increase the supply. The present yield of the one well is about 78,000 gallons daily. The clinique as a whole has a system of drains and sewers of its own; the sewage is carried to a large plot of land, the property of the clinique, near the banks of the River Moskva, where it is employed for purposes of irrigation.

It is impossible to close these notes upon the clinique without some reference to the fine series of operating theatres, laboratories, and lecture theatres which it contains. The so-called "Institutes," whether of Hygiene, Anatomy (see Fig. 9), or any other branch of medical science, are goodly-sized buildings containing series of well-fitted laboratories (bacteriological, biological, chemical, physical, &c.), and large lecture theatres, museums, and libraries. But there are also theatres and laboratories, and in many cases small libraries and museums, attached to the clinical buildings as well. Most of the cliniques have rooms for carrying out microscopical, bacteriological, and chemical investigations in connexion with the cases under treatment, and all have lecture theatres. The lecture theatre is generally a room well lighted from the top, and with seats for 200 or 300 students arranged in the usual amphitheatre fashion. There are many operating theatres, not only attached to the surgical wards proper, but also in some of the special departments, as, for example, the Ophthalmic, the Dermatological, and the Obstetric and Gynæcological Cliniques. As they are all more or less alike in general principle the operating-rooms of the Surgical Faculty Clinique may be taken as good typical examples. This clinique was formerly under the charge of Professor Skifosofski, and is now in the hands of Professor Bobrof. There are two operating theatres attached to it—a large and a small—the latter known as the "Laparotomy Theatre," but in reality reserved not only for laparotomies, but for all operations which involve the opening of the great cavities of the body. The large operating theatre is horseshoe-shaped, and having a large gallery in addition to the amphitheatre of seats can accommodate nearly 300 spectators. The floor is of asphalte, painted with oil paint. The table is lighted by an immense window behind it, measuring about 24 ft. in height and 13 ft. in width; this window, instead of being double like other windows is triple, a hot-water pipe passing between the two outer sashes to warm the air between them in winter. The principal articles

of furniture in the theatre are two plate-glass cupboards for the instruments; a glass table upon which to place those used during an operation; a marble basin in which to wash them after the operation; a long marble table for the dressings and other apparatus; two vessels for sterilising the instruments by means of boiling; sterilisers for preparing the aseptic dressings; and high stands for the antiseptic or aseptic solutions. The operating tables are quite simple, are constructed of either wood or zinc, and move absolutely noiselessly and imperceptibly upon rubber-covered wheels. The patient is anæsthetised in a separate room outside the theatre, and it may be added that chloroform is the anæsthetic most often employed. The so-called "Laparotomy Theatre" is much smaller than the large theatre, and students are admitted to the operations here in groups of not more than twenty at a time. There are no seats, but the floor is raised a few feet round the central space reserved for the operator and his assistants. The temperature is kept constant at 18° R. (72·5° F.) when operations are being performed. Admission to the wards of the clinique is not quite free; patients in the general wards pay a small fee of 9 roubles (less than £1) per month. Those in private wards pay from 50 to 150 roubles (roughly from £5 to £15) a month. The professors, however, have discretionary powers to admit deserving cases to the general wards without charge, provided that the number thus admitted does not exceed 40 per cent. of the total number of patients.

It may interest some readers to add here a few words as to the method by which hospitals, as a rule, are supported in Russia. It is the rare exception, if indeed any such exist, to find a hospital dependent upon the voluntary contributions of the public. In the towns the hospitals are generally supported by the municipalities. A tax of about a rouble or a rouble and a quarter per annum is levied upon all persons below a certain social position—that is to say, roughly, upon all persons of the labouring classes and servants—and this entitles those who have paid it to free treatment in the municipal hospitals. The tax is easily gathered, as under the system of passports prevailing in Russia every person's passport must be stamped by the authorities once a year, and at that time the hospital tax is paid. There is at present some talk of altering this system in St. Petersburg. It is proposed in this city to levy a general tax of 2 roubles a year upon every citizen in support of the hospitals, but the proposal is already meeting with some opposition. In the smaller towns and in the country a sufficiency of hospital accommodation is guaranteed to the artisan class by an Imperial ukase of the year 1860, in accordance with which all factories and large trade establishments are compelled to maintain small hospitals providing at least one bed to every 100 workmen, and the proprietors are forbidden to take pay of any kind from the workmen in support of the hospital. This law, however, does not apply to the capitals or to Warsaw, and it has been pointed out in a recent controversy on the subject that this tells rather unfairly on the working classes in these cities, for they are compelled to pay a hospital tax, while their fellows in the provinces are exempt from it. In the country generally the hospitals are supported by the *zemstvos* of either "government" or "district"—those local governing bodies to which frequent reference has already been made in these notes.

All these hospitals, whether supported by the State, by municipalities, or the *zemstvos*, whether founded by the charity of private individuals or by one of the great central charities briefly alluded to in an earlier chapter, are administered on the same principles—the principles laid down in the "Hospital Statute" (*Ustav lètchebnuikh zavedinii*) of 1893. Under this Statute hospitals which take in more than 15 patients are divided into four classes, according to the number of beds they make up. Those with more than 300 beds belong to the first class; those with from 101 to 300 beds to the second class; those with from 61 to 100 to the third class; and the fourth class includes those with from 16 to 60 beds. The exact mode in which the institution is to be conducted, the duties of each member of the staff, the method of admitting patients, and many other matters, are defined with much exactitude in the Statute. Without venturing to enter on the impossible task of trying to compress into a small space all the complicated details of a Statute such as this, it may suffice to mention one or two facts relating to the medical staff.

The management of a Russian hospital is, to a very great extent, concentrated in the hands of the so-called *glavnui vratch*, or "head physician," a title which does not at first sight indicate what the manifold duties and responsibilities of such an office really are. The "head physician" has not only the entire control of the medical details of the hospital, but all administrative and domestic matters in connexion with it are under his direction. The office is, as a rule, only attained by comparatively senior men; the work it entails in a hospital of any size is very arduous and the responsibility great. The *glavnui vratch* always lives within the precincts of the hospital and is the real mainspring of the institution. In hospitals of the first three classes he is assisted by a hospital board (*pravlenié bolnitzui*), which consists of two of the medical men on the staff, who serve in turn, and the superintendent. The medical staff consists of "consultants," "senior" and "junior staff doctors" (using the word "doctor" as including physician and surgeon), and "ward doctors" (*palatnui vratch*) corresponding to house physicians and house surgeons. Hospitals of the first two classes have a "prosector," or pathologist, and a superintendent (*smotritel*), who has charge of the domestic arrangements and is responsible for all the stock of the hospital, except the surgical instruments. The *feldschers* have already had a chapter devoted to themselves. It only remains to mention the nurses. A great part of the nursing is done by the *feldschers;* they attend the physician or surgeon at his examination of the patients, enter his orders in a book, and transmit them to the nurses proper; they do most of the dressing of the minor surgical cases, and many of the other duties which we are accustomed to see performed by the nurses are performed by the *feldschers*. The nurses are, as a rule, called "sisters of mercy" (*sëstra miloserdii*), a title which does not, however, imply that they have taken vows or are members of any religious sisterhood, though many are attached to the Red Cross Society or other analogous associations. They are assisted in some of the rougher work of the wards by female ward attendants known as *sidiélki* (from *sidiét*, to sit), who may be defined as half nurses and half servants.

XII.

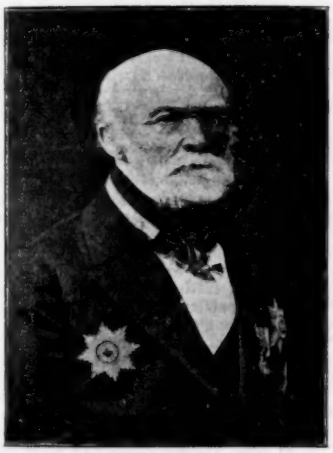
Russian Medical Celebrities of the Present Century.—The Lives of two selected.—Outline Biographies of Pirogof and Botkin.—The Pirogof Medical Society.—The Pirogof Statue in Moscow and Museum in St. Petersburg.—The Botkin Hospital and Journal.—Conclusion.

IN the history of medicine in Russia during the present century, which has of necessity been somewhat disconnectedly told in these pages, the names of many distinguished Russian physicians and surgeons are met with, whose services to the profession should entitle them to more than a mere passing mention. Such were Pirogof, Inozemtzef, Dobroslavin, Pelican, Tchistovitch, Zdekauer, Botkin, and others, to name only those who are no longer living. It is impossible here to give a detailed notice of their lives and labours; and exigencies of space will permit of a brief account of two only, the two whose names open and close the list just given and who have, perhaps, gained a wider reputation outside their own country than any of the others mentioned.

The fame of Nicolaus Ivanovitch Pirogof is assured perpetuity from the fact that his name is associated with a certain operation which he devised and practised. To most Englishmen he is probably known solely as the originator of a mode of amputating the foot; but he has, in truth, far wider claims to recognition. He was not only a great anatomist and surgeon, but he was also a most capable administrator—reformer in the best sense of the term—and an interesting and thoughtful writer. More than this, he was the first to use anæsthetics widely in military surgery; he foreshadowed the modern system of ambulances, Red Cross Societies, and aid to the sick and wounded in time of war, and he introduced nursing by women into Russian hospitals, military and civil. The facts of his life may be briefly told. Pirogof was born in 1810; he was the son of an official in the commissariat department of the army. He entered the University of Moscow at the age of fourteen, and he was only seventeen when he obtained the title of *lékar*. He at

once entered the "Professorial Institute," a kind of college which then existed for the preparation of young graduates who intended to aim at a professorial chair. Even for those times this was an extraordinarily quick career and an unusual position for one of his years. Subsequently, he was for four years Professor of Surgery at Dorpat, and in 1840 he was appointed to the chair of Hospital Surgery in St. Petersburg. He soon became one of the leading consultants of the day in the capital.

FIG. 12.



Nicolaus Pirogof, the great Russian Anatomist and Surgeon.

In 1847 the use of anæsthetics during surgical operations was introduced into Russia and the first operations performed under ether were performed by Pirogof. He published the results of his experiences with the new method in an essay, written in French, and this came to the knowledge of the Emperor Nicholas I. Russia was then at war with the Turks, and the Czar—to his eternal honour be it recorded—at once commanded Pirogof to proceed to the seat of war in the Caucasus and test the practicability of employing anæsthetics in the field hospitals. Pirogof seems to have been the first great surgeon to employ anæsthesia largely on the battle-field. He published an account of his work in this campaign in a book called "Rapport d'un Voyage au Caucase," issued in 1849. In 1848 occurred the great epidemic of cholera, the worst of the century. Pirogof, who was a keen pathologist as well as an anatomist and surgeon, made as many as 800 necropsies upon the bodies of patients who had died from cholera. Shortly afterwards he published his valuable work on "The Pathological Anatomy of Asiatic Cholera." From 1849 to 1852 he was busy in his work as professor, as director of the Anatomical Institute, and as consultant to six of the large city hospitals. The "Annals of a Hospital Clinique" was his principal literary labour at this time; and it was in this periodical, which was printed in German, that he first described the operation which has since borne his name. In 1854 his splendid Anatomical Atlas appeared, and shortly after this he was sent to the seat of war in the Crimea. He inspected all the field hospitals on the Russian side, and was himself in charge of the barrack hospitals at Simpheropol. He has left a vivid, if harrowing, description of the sufferings of the troops in the intense cold of the Crimean winter. It was his experience here, and his recognition of the many unnecessary and preventable horrors of war, which led him to propose the reforms in the direction of aid to the wounded which have already been briefly alluded to. Soon after the war he published a series of interesting and suggestive essays under the title of "Questions of Life," and among the "questions" there discussed the problems of education in its widest sense were treated at perhaps greater length than any others. It was probably the views he there expressed that led to his selection by the Emperor Alexander II. for the appointment of Curator of the Odessa Educational District—a post the nature of which was explained in an earlier chapter. After a short period he was transferred to the same appointment in the Kief district; but unfortunately his views on the relationship existing between the universities and the Government did not coincide with those of the Minister then in power. It was about this time that he published his long pamphlet upon "The University Question," in which he claimed for the universities and for the students greater freedom of literary and scientific discussion and fuller powers of self-government than they then had. The pamphlet was prohibited, and Pirogof felt himself in honour bound to resign his appointment.

In 1870 he went as the representative of the Russian Red Cross Society to the Red Cross Conference in Berlin, and at the same time he took the opportunity of inspecting a large number of the field hospitals on both sides in the Franco-Prussian war. He has left a description of this tour in a work published in St. Petersburg in 1871. Six years later the Russo-Turkish war broke out, and in September, 1877, Pirogof, though he was then sixty-seven years of age, was sent to Roumania by the Russian Red Cross Society. His experiences of this war were also published in book form on his return to St. Petersburg. In 1881 he completed his fiftieth year of public service, and although his health had already begun to fail he could not refuse the invitation of his Moscow colleagues to attend a festival organised in Moscow in his honour to commemorate the occasion. He himself knew at this time that he had not many months to live, though he hid the fact from others that he was suffering from malignant disease. He died four months later, on Oct. 27th, 1881.

Intending members of the Congress about to meet in Moscow may be glad of this outline, however brief, of the life of Pirogof, for his name will be on many lips at that time. During the Congress week in Moscow his statue, which has been raised in front of the university cliniques, is to be formally unveiled; and in the following week in St. Petersburg the new "Pirogof Museum," attached to the Army Medical Academy, the nucleus of which is the splendid anatomical and surgical collection made by Pirogof himself, will be officially inaugurated.

FIG. 13.

Professor S. P. Botkin.

Sergé Petrovitch Botkin was Pirogof's junior by many years, but their lives touched at many points. He was born in Moscow in the year 1832, and was a graduate of that University. He had not long taken his degree when, in 1854, he was commanded to the Crimea with Pirogof, where he was placed in charge of the "typh" wards—the word "typh" including all cases of both typhus and typhoid fevers. His defective eyesight, from which he suffered all his life, unfitted him for the practice of surgery, and he henceforth devoted himself entirely to the medical side of the profession. After the war was over he spent some years abroad, studying under Virchow, Rokitanski, Hoppe-Seyler, and others. He returned to Russia in 1860, and was shortly afterwards appointed to the Faculty Chair of Clinical Medicine in the Army Medical Academy in St. Petersburg. His career in the

capital was for many years one of unbroken success. He soon attained the position of the foremost consulting physician in the City. In 1872 he was appointed physician to the Court and accompanied the Empress Marie Alexandrovna, who was then ailing, to the Crimea, which he had before visited under such very different circumstances. It was in the same capacity of *leib-medik* that in 1877 he went in the suite of the Czar to the seat of war, and he has left some interesting reminiscences of what he saw of the Russo-Turkish campaign. In the following year occurred the outbreak of plague on the lower reaches of the Volga. A case presenting some suspicious symptoms was admitted into Botkin's wards in St. Petersburg, and in an unfortunate moment he let it become known that he regarded it as a mild case of plague. Something like a panic occurred in the city, and it has been necessary to record the incident here, for the storm which in consequence broke over Botkin's head and the gross and unfounded charges made against him of having spread the rumour to suit his own private ends told seriously upon his health. He suffered severely from attacks of angina; and later hæmoptysis appeared. He tried many health resorts, Russian and foreign, to gain relief, but with very partial success. His reputation in St. Petersburg had been little shaken by the incident just related, and he continued to occupy his honourable position in the profession until his death. He died at Mentone on Christmas-eve, 1889. His literary works included many essays on various clinical subjects and upon matters connected with public health. It should be added that he was the first medical member ever elected to the St. Petersburg municipality, and that he was president of the Commission appointed by the Government in 1886 to inquire into the sanitary condition of the empire and the means for improving it.

The names of both Pirogof and Botkin have since their death been attached to certain institutions founded to commemorate their labours in the cause of medicine. Even before Pirogof's death the proposal was made to form a medical society which should bear his name. Under the title of the "Society of Russian Practitioners in Memory of Pirogof" this has since become the most representative of all Russian medical societies. Conferences lasting eight days are held under its auspices, at intervals of from one to three years, in one of the capitals or more important provincial towns; and these meetings are attended by large numbers of medical men from all parts of the empire. The society is, in fact, in not a few points closely analogous to the British Medical Association.

The memory of Botkin is perpetuated by the name of one of the most important of the municipal hospitals in St. Petersburg, known as the "Barrack Hospital for Infectious Diseases in Memory of Botkin," and by the fact that a medical journal is published weekly in St. Petersburg under the title of *The Botkin Hospital Gazette* (*Bolnitchnaia Gazeta Botkina*).

With this condensed account of the life and work of two great representative Russians, surgeon and physician respectively, the present notes upon the past and present of medicine in Russia may fitly come to a close. The lives just told may be taken as types of the lives, *mutatis mutandis*, of the Russian physicians and surgeons of to-day, with many of whom Englishmen who go to the approaching Congress will have an opportunity of becoming acquainted, but of whom it would be an impertinence to speak here in terms of eulogy. Brief *curricula vitæ* of some of the more distinguished Russian medical men of the day, more particularly of those officially connected with the Congress, have already been given in the notes upon the Twelfth International Medical Congress. But if living individuals may not be praised, living institutions may; and of the medical institutions of Russia it may truly be said that they are worthy of the great country which has given them birth, of the great people by which they are supported, and of the great profession which has brought them to their present admirable state of development.

"FLOREAT MEDICINA ROSSICA."

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